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NATIONAL INSTITUTE ECONOMIC REVIEW

This is a two-monthly review.
The first issue, published in January 1959, presented a full-length survey of the economic situation, which will be repeated annually. This and other numbers contain a shorter general survey, followed by special articles on topical economic problems and studies of underlying economic trends.

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SUMMARY

The economic situation

Production in Britain has been rising fast since February, impelled by the rise in consumer spending and in exports, and by some recovery in investment in stocks, which had dipped earlier in the year. These three types of demand will probably go on rising.

In the early months of the recovery, consumption rose at the expense of savings. Now the increase in incomes after tax has caught up with the increase in spending, and personal savings appear to have been as high in the middle of this year as in the middle of last. This is an encouraging point : it suggests that there is scope for a continuing, though probably slower, increase in consumption.

Exports rose 6½ per cent (in volume) in the second quarter, and have more or less maintained this new high level since then. Sales to western Europe should go on rising, since recovery is well under way there ; the steel strike may temporarily check United States expansion, but it should be resumed as soon as the strike is settled. It seems doubtful, however, whether exports of cars to North America will rise as fast as in the last two years. Sales to the overseas sterling area countries should begin to go up too : these countries are recovering faster than other primary producers and a number of them have relaxed import restrictions.

The rise in production should not be checked either by shortages of capacity or by shortages of labour : industrial production is still only 6 per cent higher than it was four years ago. Unemployment in August was very little lower than in August 1958 and civil employment appears to have been about the same : the rise in production has led to very little increase in employment.

There is no sign that expansion is upsetting the sterling area's balance of payments. Britain's imports have risen (in particular imports of oil and of manufactured goods), and her trade gap has widened a little ; but the improvement in the overseas sterling area's balance of payments has probably offset this. The reserves have continued to rise through July and August, the seasonally unfavourable months. Prices have remained stable. The increase in output since a year ago is about sufficient to offset the increase in wages and in profits ; and there has been no appreciable movement in import arrival prices as yet.

For the longer term prospects there is, however, one discouraging sign : manufacturers do not yet appear to have revised their investment plans upwards and, indeed, on their present intentions, are still proposing to reduce investment in manufacturing industry next year. At the moment, there are no published plans for an increase in public investment beyond the end of this budget year. If public investment is to be raised further, the decision should be made soon.

Trends in payments and reserves

Primary producing countries—in particular the overseas sterling area countries—regained some reserves in the first half of 1959. But western Europe has not been losing reserves, because its gains from the United States have been far greater than its losses to the primary producing countries. It was France and Italy which raised their reserves substantially in the first half of 1959 ; German official reserves fell—for reasons which are probably temporary.

The United States outflow seems likely to continue, though rather more slowly. So long as this is so, European countries should continue to gain reserves, and there is no reason why they should follow the United States in raising interest rates, which are in any event of limited efficacy in regulating reserve movements.

(*The article ' The demand for industrial materials*, 1950-57 ' *is summarised on page* 43.)

THE ECONOMIC SITUATION

THE GENERAL OUTLOOK

The general trend of the economy has changed little in the past two months. There is further evidence of recovery abroad. At home, expansion continues, with industrial production rising quite rapidly. Prices have remained stable and the foreign payments position, helped by the recovery in the overseas sterling area's balance, remains favourable.

Higher consumers' expenditure since the Budget, higher exports and higher investment in buildings, both housing and public construction, have been the main elements in the expansion of demand since the spring. In these sectors the prospects for continued expansion are good ; and investment in stocks is probably now rising too. But the rise in demand and output has not yet induced a recovery in private industries' plans for fixed investment. The Board of Trade's recent survey of investment intentions shows that fixed investment in private manufacturing industry is now expected to decline during the rest of this year and during next year too ; fixed investment by distribution and other private industry outside manufacturing is expected to level out next year, after a considerable increase this year. In consequence, total fixed investment by private industry is expected to continue to slide back from the level achieved in 1957.

This decline in investment by private industry will retard, but probably not halt, the growth of total demand and output : the expansion of demand and output is likely to continue. But lower private investment will prejudice the scope for expansion in the more distant future.

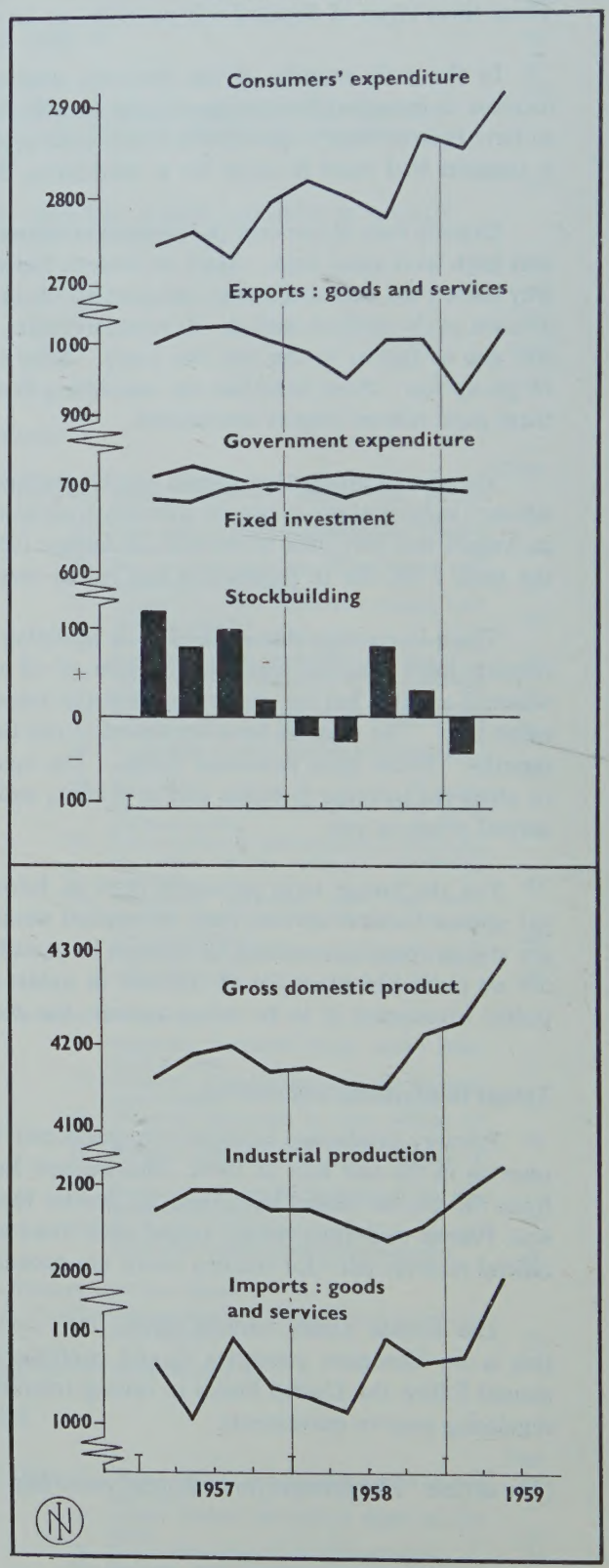
THE POSITION IN BRITAIN

National expenditure

The latest estimates of national expenditure, seasonally corrected, are shown in chart 1. They confirm that in the first quarter, the growth of consumers' expenditure, seasonally corrected, halted before the Budget and that exports fell temporarily. At the same time, investment in stocks was checked, and is estimated, after seasonal correction, to have given way to some disinvestment in stocks. This is surprising since the check to the growth of consumers' expenditure and the fall in exports might have been expected to cause some temporary unintended increases in stocks. Business may well have adopted a cautious stock policy before the Budget, partly in the expectation that purchase tax might be reduced and partly because of uncertainty about the prospects for continuing expansion. But it is possible that the

Chart 1. National expenditure, output and imports

£ million, 1954 prices, seasonally adjusted



Source : *Appendix table* 1.

official estimates of stocks, which are always subject to revision, may exaggerate the movement.[1]

In the second quarter, after the Budget, consumers' expenditure rose again, sharply, and exports rose too. Provisional evidence indicates that investment in stocks increased and that fixed investment was stable or perhaps slightly up.

Consumers' expenditure

In the second quarter consumers' expenditure at constant prices is provisionally estimated to have risen by 3 per cent, seasonally corrected, and to have reached a level over 4 per cent higher than a year earlier. Almost two-thirds of this post-Budget increase in spending was concentrated on durable goods. Spending on durables showed an even larger increase than it did in the fourth quarter last year, after the abolition of hire purchase restrictions. Compared with the second quarter 1958, spending both on furniture and cars was up by nearly 20 per cent, and spending on radio and electrical goods by nearly 35 per cent. Among non-durable goods, there was a marked rise in spending on beer (consumption of which was stimulated both by the warm weather and by the tax cut) and on tobacco.

Retail sales figures for July and August indicate that consumer spending stayed up. As in June, total sales were 4 to 5 per cent higher than a year earlier, with the rise still concentrated on durables.

Table 1 gives figures of consumers' incomes, expenditure and borrowing, including provisional estimates for the second quarter. The figures are in money values, but since prices changed little they are a close guide to the changes in real income and expenditure.

The striking feature of these estimates is that by the second quarter the increase in incomes (after tax) was sufficient to match the increase in spending since the third quarter of last year ; there was no reduction in the residual ' savings ' item. Having risen in the third quarter of 1958, ' savings ' fell in the fourth quarter, reflecting the fact that people were borrowing and spending much more whilst their incomes had risen little. Since then the rise in incomes has outstripped the rise in spending, and ' savings ' have recovered to about the same high level as in the third quarter. The estimates are provisional but the change is significant.

It is at first sight surprising that in these conditions hire purchase borrowing should have risen again so sharply in the second quarter. Consumers as a group could have financed their extra spending out of extra incomes. However they acquired part of their extra incomes in a lump only at the end of the quarter when the tax concession, including back payments, came into effect. Moreover those who borrowed more and those whose incomes rose may be different groups of people.

The implication for the future is that higher incomes should retard and counteract the waning of the hire purchase boom. As noted in earlier issues of this Review, the rate of borrowing on hire purchase, net of repayments, is likely to slow down : the rate of repayments is likely to begin catching up with the rate of borrowing. But the faster new borrowing rises, the longer it will be before this slowing down occurs ; and since incomes have risen and are likely to go on rising, consumers are in a position both to continue new borrowing at rising rates and to spend

[1] The estimate of gross domestic product for the first quarter arrived at by summing national expenditure minus imports is considerably lower than the estimate arrived at on the basis of trends in output, thus leaving an abnormally large statistical discrepancy (see *Appendix table* 1). Too low an estimate of investment in stocks is the most likely explanation. It is the item of demand that is both most volatile and hardest to estimate.

Table 1. Personal income, expenditure and borrowing

£ million, seasonally adjusted

	1958				1959	
	I	II	III	IV	I	II[a]
Disposable income after tax	4,036	4,065	4,072	4,133	4,181	*4,280*
Consumers' expenditure	3,705	3,729	3,666	3,825	3,806	*3,875*
of which durables	282	298	267	300	308	*350*
Residual (=' savings ')	331	336	406	308	375	*405*
Change in hire purchase debt outstanding[b]	+ 3	+ 18	+ 12	+ 78	+ 57	+ 92
Change in bank advances outstanding[b][c]	+ 3	+ 4	+ 12	+ 48	+ 53	+ 51

Source : *Appendix tables* 6 *and* 10, *Monthly Digest of Statistics*, and NIESR estimates.

(a) Provisional estimates in italics.
(b) Not seasonally adjusted.
(c) Change in ' personal and professional ' bank advances in quarters ending at the end of February, May, August and November.

more without borrowing. There is therefore a good prospect that consumers' expenditure will continue to rise, though more gradually than in the months immediately after the Budget.

The rise in incomes in the second quarter owed less to higher wage rates than the increases in the fourth quarter of 1958 and first quarter of this year. But by the second quarter higher employment and longer working hours had begun to raise earnings, and there appears to have been some increase in profit incomes. Added to that, the direct tax concessions, as noted earlier, came into effect at the end of the quarter. In the months ahead, gradual increases in wage rates, employment and hours, together with the response of profits to recovery, are likely to maintain the upward trend of incomes. On the other hand, prices should remain broadly stable, leaving an increase in purchasing power.

Fixed investment

Fixed investment, having remained unchanged in the first quarter, appears from present data to have changed little in the second. It may have risen slightly after seasonal correction. Housing, public and private, increased again. Building work for the public authorities rose and so did building work for private industry. This all-round increase in building probably owes a good deal to the unusually favourable weather. On the other hand, investment in plant and machinery appears to have been less buoyant. There was a small increase in expenditure on plant, machinery and vehicles by the private sector, reflecting higher expenditure, mainly on vehicles, by the distribution and service industries. There is still no information for public investment in plant and machinery in the second quarter, so that it is impossible to say whether the planned increase is yet coming through.

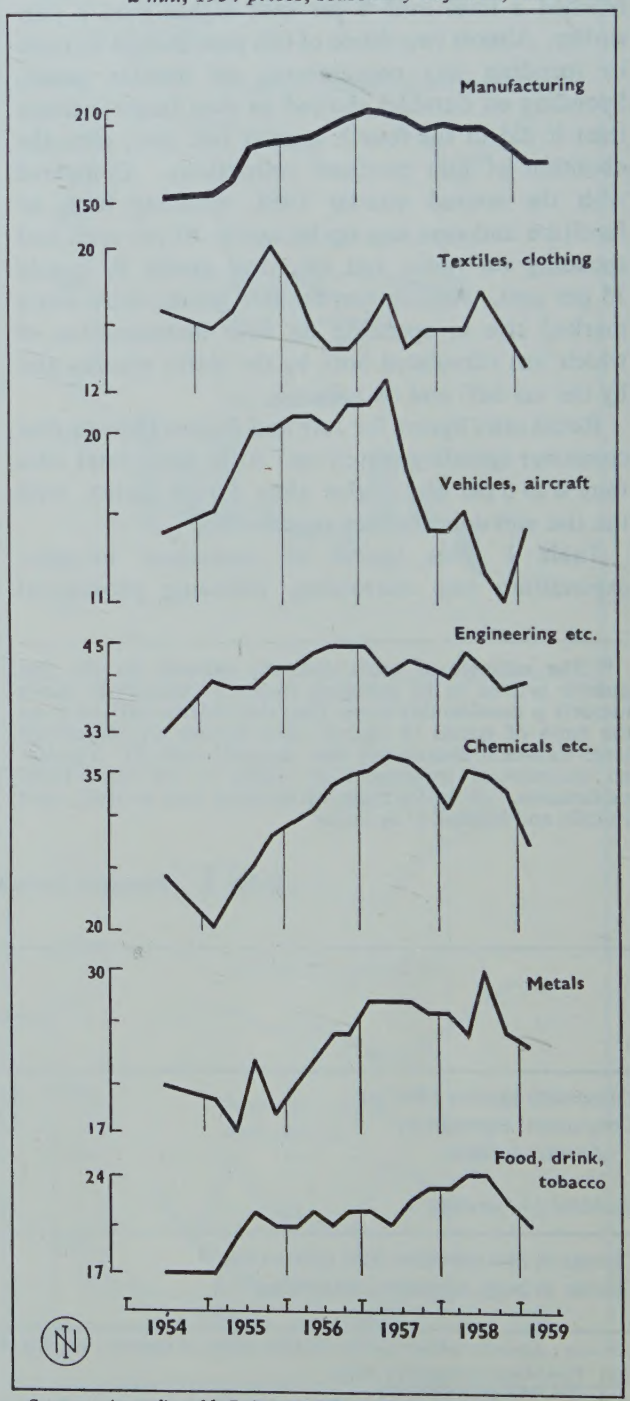
The most striking new information lies in the results of the Board of Trade's enquiry into private industry's expected investment expenditure this year and investment intentions for next year. The enquiry, made this summer, implies that investment by private manufacturing industry will continue to decline in the rest of this year and in 1960 too. This year expenditure on buildings is expected to be about one-sixth lower than in 1958. Next year expenditure on buildings is expected to recover fractionally, but a further decline in expenditure on plant and machinery is forecast.

In distribution and other private industries outside manufacturing, fixed investment is now expected to rise more rapidly this year than was expected before. But the results of the enquiry suggest that next year it will level out or perhaps fall slightly. Higher investment in vehicles, which is important in this sector and can change quickly, may account for a considerable part of the expected increase this year.

The prospect that investment by private industry will continue to decline must result from the fact that higher demand only recently began to reduce idle capacity and still has scarcely begun to do so in some industries. Investment expenditure, as shown in chart 2, has been falling in nearly all the main sectors of manufacturing ; and orders have generally been lower than expenditure. In the first two quarters, building orders by private industry rose slightly, but, having been below expenditure, they will have to rise

Chart 2. Investment in manufacturing industry

£ mn., 1954 prices, seasonally adjusted, ratio scale



Source : *Appendix table* 7, *Board of Trade Journal*, NIESR estimate.

much further to be consistent with the forecast of investment intentions. The increase in orders for machine tools appears to be at variance with the investment intentions for plant and machinery, but machine tool orders are a less reliable indicator than the investment intentions enquiry : machine tools are only a small component of plant and machinery and the figures include orders by the public sector.

The prospect for fixed investment can be summed up in this way. First, it is now fairly clear that a recovery in private investment to the 1957/58 level is a long way off, even if investment intentions are gradually revised upwards in the remainder of this year and during next year. This means that the growth of productive capacity in private industry will continue to slow down. Secondly, total fixed investment, public and private together, should be sustained and probably raised slightly for the rest of this year and into next year by the increase in housing and the rise in public investment, provided it comes forward at an adequate pace. That is uncertain. Orders for public investment appear to be coming forward slowly.

Thirdly, the further prospect for total investment is less encouraging. The rise in housing may level out next year ; and the rise in public investment, if the plans are fulfilled, should slow down after a spurt that was designed to fill in the gap before an upsurge in private investment. It is now clear that no great upsurge can be relied upon for next year, and that there is scope for a continuing increase in public investment, social and productive. Because of the inevitable delays of planning, a decision to raise public investment in 1960/61 should be taken soon.

Investment in stocks

Investment in stocks, especially of finished goods, normally shows a sharp seasonal increase in the first quarter of the year. This year the increase was abnormally small, and the seasonally corrected figures for investment in stocks declined. The change was most pronounced in manufacturing industry, where investment in stocks of finished goods and work in progress is estimated to have been £85 million lower (at 1954 prices) than in the first quarter of 1958. On the other hand, manufacturers ran down their stocks of raw materials and fuel at a lower rate than they had done throughout 1958.

In the second quarter manufacturers' stocks of finished goods continued to decline, while retailers increased their stocks ; but manufacturers' work in progress increased and de-stocking of materials and fuel appears to have come to an end as recovery got under way. That is confirmed by our estimates of stocks of imported commodities[1] : provisional figures show little change in stocks of imported materials and a sharp increase in stocks of imported fuel in the second quarter. There was also a marked increase in work in progress in the building industry.

Total investment in stocks appears from this evidence to have risen (allowing for seasonal variation) after the first quarter dip. There is still good reason to expect that investment in stocks will rise further as firms succeed in adjusting their stocks upwards in line with higher turnover. In a period of resumed expansion, such a movement is likely to extend progressively from raw materials to work in progress and finished goods.

Exports

The recovery in exports in the second quarter, which contributed to the general rise in demand, seems broadly to have been maintained. The volume of exports, which is bound to fluctuate from month to month, dipped in June, rebounded in July and declined again in August. In July and August taken together, the volume appears to have been much the same as in the second quarter.

The full figures for the second quarter confirm that the main increase in exports was to North America and western Europe. There was also an increase in exports to the sterling area which continued in July ; special factors contributed to this rise—shipments of steel plant to India for the steelworks programme in the second quarter, and new registrations of ships in the Bahamas in July. Exports to Latin America and other primary producing countries outside the sterling area continued to decline.

The leading commodities in the increase in exports continue to be cars, metal goods, and chemicals. But there has also been a marked increase in exports of textiles, following a long decline. In July iron and steel exports did particularly well, but there were increases in all the main groups. The analysis of trends abroad (page 11) suggests that exports—though they may fluctuate from month to month—should continue to rise, with the sterling area, as well as Europe and North America, offering expanding markets.

Production

The most recent figures show that the seasonally corrected index of industrial production, having remained almost stable at 109/110 from March to June, rose to 111/112 in July. The month to month movements of the index of production cannot, however, be interpreted too closely. The index tends to move in fits and starts and the latest figures are often revised. The rate of increase shown by the figures has been high. Since the dip last summer the index has risen by between 6 and 7 per cent. On the other hand,

[1] See Appendix, table 11

it is only 6 or 7 per cent higher than it was in 1955, before stagnation set in. Allowing for all the investment that has taken place since then, there must still be considerable capacity in reserve.

There is little new information on the pattern of recovery. Building and the consumer goods industries continue to lead the recovery with industries producing intermediate products, for example building materials, paper and chemicals, also showing marked increases in output. There is no evidence of any increase in the output of plant and machinery. In the first five months of the year, total output of engineering and electrical goods (excluding ships and miscellaneous metal goods) has been running higher than a year ago, but this appears to have been largely due to higher output of consumer goods and vehicles.

In the basic industries, steel production continued to recover in June, July and August. Full figures for the second quarter show that the rise in steel production was the result of a rise in steel consumption rather than reduced drawing on stocks : stocks held both by producers and by merchants and consumers continued to be drawn down at the same rate as in the first quarter. De-stocking, which by the second quarter may have been partly the unintentional consequence of the rise in consumption, is unlikely to continue much longer.

On the other hand, the problem of surplus coal production has become more acute during the summer. It was pointed out in the last issue that whereas in the first half-year coal consumption was 8 per cent lower than in 1958, coal production was running only 4 per cent lower and that in consequence undistributed stocks had risen sharply. The subsequent period has accentuated this trend : partly because of the exceptionally warm weather, consumption has been running still further below last year's level (11 per cent below), while the reduction in output has been considerably smaller. Deep-mined production was actually running slightly above last year's level in the ten weeks ending 12th September, and the much lower level of opencast production has brought the total to only 2 per cent below last year's level. In consequence there has been a further rise in undistributed stocks.

Employment and unemployment

The increases in production have continued to come chiefly from higher output per man. Nevertheless employment and working hours have been rising : in June total employment, seasonally corrected, which had turned upwards in April, rose again. In June and July employment in manufacturing generally rose rather more rapidly than before. Outside manufacturing the increase was small ; a continued decline in employment in mining, agriculture and transport offset increases elsewhere. In spite of the rise in employment, total civil employment in July was still lower than a year earlier.

Recent information on hours worked is scant. In manufacturing, hours increased by about ½ per cent between February and May, and there has been some further increase since then.

Unemployment has changed little. In August the figure included the accession of school-leavers, whose number was raised by a bulge in that age group : 59,000 juveniles were then registered as unemployed—9,000 more than in August 1958. After seasonal correction, however, the figure of unemployment remained virtually stable, as it has done since May.

Unfilled vacancies (seasonally adjusted) continued to increase slowly throughout this period, indicating, in combination with the unchanged level of unemployment, that the demand for labour was slowly increasing. But the number of unfilled vacancies is still considerably lower than the number unemployed : in August it stood at about 240 thousand while the number unemployed was 450 thousand (both seasonally corrected).

Table 2 compares the current percentage levels of unemployment and unfilled vacancies with those at the beginning of the year for eleven regions in the United Kingdom. The figures, which are not seasonally corrected, reflect the seasonal decline in unemployment between January and August as well as the effects of the recovery. It appears that the rise in demand for labour has been fairly evenly spread between the regions. But where unemployment was initially low, for example in the London and South-Eastern region, the decline in unemployment has been comparatively small and higher demand has shown up fairly markedly in unfilled vacancies. In regions where unemployment was initially larger, for example Scotland and the North, higher demand, as would be expected, has reduced unemployment without substantially raising unfilled vacancies.

Imports

With demand at home rising, the increase in imports has continued. In total, the volume of imports in the first half was 7 per cent higher than in the first half of 1958 ; the July and provisional August figures indicate a similar rise compared with a year ago. Revised figures show that, compared with a year earlier, about one-third of the increase in imports in the first half of this year was due to the ending of de-stocking, the remainder to higher consumption.

The rise in imports of fuel and finished manufactures is still outstandingly large. But the latest figures show that imports of semi-manufactures and basic materials have also begun to rise quite sharply in response to the recovery in activity. On the other

Table 2. Unemployment and unfilled vacancies by regions

Percentages of the labour force

Region	Unemployment			Unfilled vacancies		
	12th January, 1959	17th August, 1959	*Change*	7th January, 1959	12th August, 1959	*Change*
London and South-Eastern	1.7	1.1	*— 0.6*	0.8	1.5	*+ 0.7*
Eastern and Southern	2.1	1.3	*— 0.8*	1.0	1.6	*+ 0.6*
South-Western	2.9	1.7	*— 1.2*	1.0	1.5	*+ 0.5*
Midland	2.2	1.5	*— 0.7*	0.7	1.3	*+ 0.5*
North-Midland	2.1	1.5	*— 0.6*	0.9	1.4	*+ 0.5*
E. & W. Ridings	2.7	1.7	*— 1.0*	0.7	1.0	*+ 0.3*
North-Western	3.6	2.5	*— 1.1*	0.6	1.0	*+ 0.4*
Northern	3.9	3.1	*— 0.8*	0.5	0.8	*+ 0.3*
Scotland	5.4	3.9	*— 1.5*	0.4	0.5	*+ 0.1*
Wales	4.6	3.4	*— 1.2*	0.6	1.0	*+ 0.4*
Great Britain	2.8	2.0	*— 0.8*	0.7	1.2	*+ 0.5*
Northern Ireland	9.7	7.3	*— 2.4*	0.2	0.2	—

Source : *Ministry of Labour Gazette.*

hand, the increase in imports of foods and tobacco in the second quarter was small (table 3).

Among basic materials, the main increase was in imports of textile fibres ; among semi-manufactures, the main items to increase were non-ferrous metals and chemicals. The rise in imports of finished manufactures has extended to a variety of goods ranging from clothing to machinery and vehicles (table 4).

The liberalisation of dollar imports of newsprint, chemicals and machinery last September does not yet seem to have had a great effect upon imports. The share of imports of these three commodities coming from the dollar area was no higher in the second quarter than a year earlier. But allowing for the delays between decontrol, ordering and delivery, it may be too early to see the full effect of the removal of restrictions, especially in machinery imports.

Table 3. Changes in the volume of imports

Percentage change over same period of 1958

	Volume	
	1st Quarter	2nd Quarter
Food and tobacco	+ 5	+ 1
Basic materials	— 3	+ 8
Fuel	+17	+33
Semi-manufactures	— 4	+16
Finished manufactures	+ 4	+29
Total imports[a]	+ 4	+ 9

Source : *Appendix table* 12.

(a) Adjusted for the effects of the dock strike and accelerated clearances in 1958.

Prices and incomes

Prices have continued stable and should remain so in the next few months. In July and August the National Institute index of import prices (based on current market quotations) rose as a result of higher prices for a number of foods and materials. There were increases in the prices of beef, bacon, butter, wheat, maize and tea, and in the prices of wool, rubber, copper, softwood, steel and zinc. The index of arrival prices is likely to reflect these increases with two or three months delay. Some increase in primary prices is to be expected in the course of recovery ; but there is no reason yet to be alarmed by the increase. It is still small in relation to total costs, and in present conditions it should be offset by the favourable trend of home costs.

Table 4. Change in imports of finished manufactures

Jan.-July 1959 compared with Jan.-July 1958

	Change in value	Change in volume
	£ *million*	*per cent*
Machinery	+16	+17
Road vehicles and aircraft	+ 6[a]	+35
Electrical machinery	+ 5	+30
Clothing, footwear	+ 5	+38
Ships	— 4	—40
Other finished manufactures	+ 9	..
Total : finished manufactures	+37	+18

Source : *Trade and Navigation Accounts, Board of Trade Journal.*

(a) Of which aircraft : £1 million.

Home costs, still below the peak level reached during the third quarter of last year[1], have benefited from the rise in productivity. Since January the rate of increase in wage rates has been slow, but the higher level of production has led to some increase in overtime earnings. Wage negotiations have not yet progressed far enough this year for it to be possible to discern a level of typical wage awards. Company profits, which fell some 3 per cent last year (after making a rough allowance for stock appreciation) had by the first quarter of this year roughly recovered last year's fall. But other profit income—notably rent—has been rather more buoyant than company profits ; profit incomes in total (net of stock appreciation) rose 3 per cent last year and were 3½ per cent above a year earlier in the first quarter of 1959. At present the increase in production must be sufficient to absorb increases both of wages and profit incomes of 3-4 per cent. The question remains whether, when the slack in the economy is taken up, production will continue to increase so fast and wages so slowly. That problem is still some way ahead.

INTERNATIONAL DEVELOPMENTS

Trends in activity

Expansion continues in North America and has been gaining strength on the Continent. Trends in industrial production are shown in chart 3. In the United States, the steel strike checked the rise in the industrial production index in July and August, but, as a result of precautionary stock-piling, industry is only now feeling the pinch. The strike will soon begin to cause serious dislocation as steel stocks are depleted. But that prospect is increasing the pressure for a settlement and once the strike is settled expansion is likely to be resumed. The rise in interest rates is expected to check the growth of house building, which has been one of the forces in recovery. But other types of investment are now rising, and so is consumers' expenditure.

The latest figures confirm that on the Continent expansion gained momentum in the second quarter. Industrial production in Germany was 5 per cent, and in France 4 per cent, higher than a year before. Italy and most other countries were expanding again too.

Primary producing countries

There are also further signs of recovery in the primary producing countries. Prices of their exports, as measured by the NIESR index, having slipped back slightly in June and July, rose again in August to regain a level some 5 per cent higher than at the beginning of the year. With a recovery in demand under way in Europe as well as in the United States, the volume of their exports has been rising as well as their export prices. United Nations estimates show that in the first quarter their export volume was 7 per cent higher than a year earlier. The sterling area continues to do better than other primary producing areas. The prices of its exports have risen more than those of other primary producing areas and probably the volume has too. In the first quarter of this year, the total value of imports by industrial countries from the overseas sterling area was slightly higher than a year earlier, whilst their imports from other primary producing countries remained lower than a year before. Total exports from the overseas sterling area in the first quarter showed a very slight rise over a year earlier, but in the second quarter, when wool and rubber were selling well, they were up by 10 to 15 per cent over the second quarter 1958.

Trends in industrial countries' exports

The recovery in demand in primary producing countries is only just beginning to lead to higher exports to those areas from the industrial countries. As shown in chart 3, Britain, the Continent and Japan have all experienced marked increases in total exports. But the increase has been concentrated on intra-European trade and on exports to North America. Compared with a year earlier, trade between OEEC countries (including Britain) in the first quarter of this year was up by 5 per cent in volume, and 1 to 2 per cent in value, while OEEC countries' exports to North America were up by 25 per cent in value. On the other hand, OEEC exports to the overseas sterling area were 13 per cent and those to other primary producing areas 11 per cent lower in value than in the first quarter of 1958. The decline in exports to the overseas sterling area, however, may well have stopped in the second quarter, when total overseas sterling area imports levelled out.

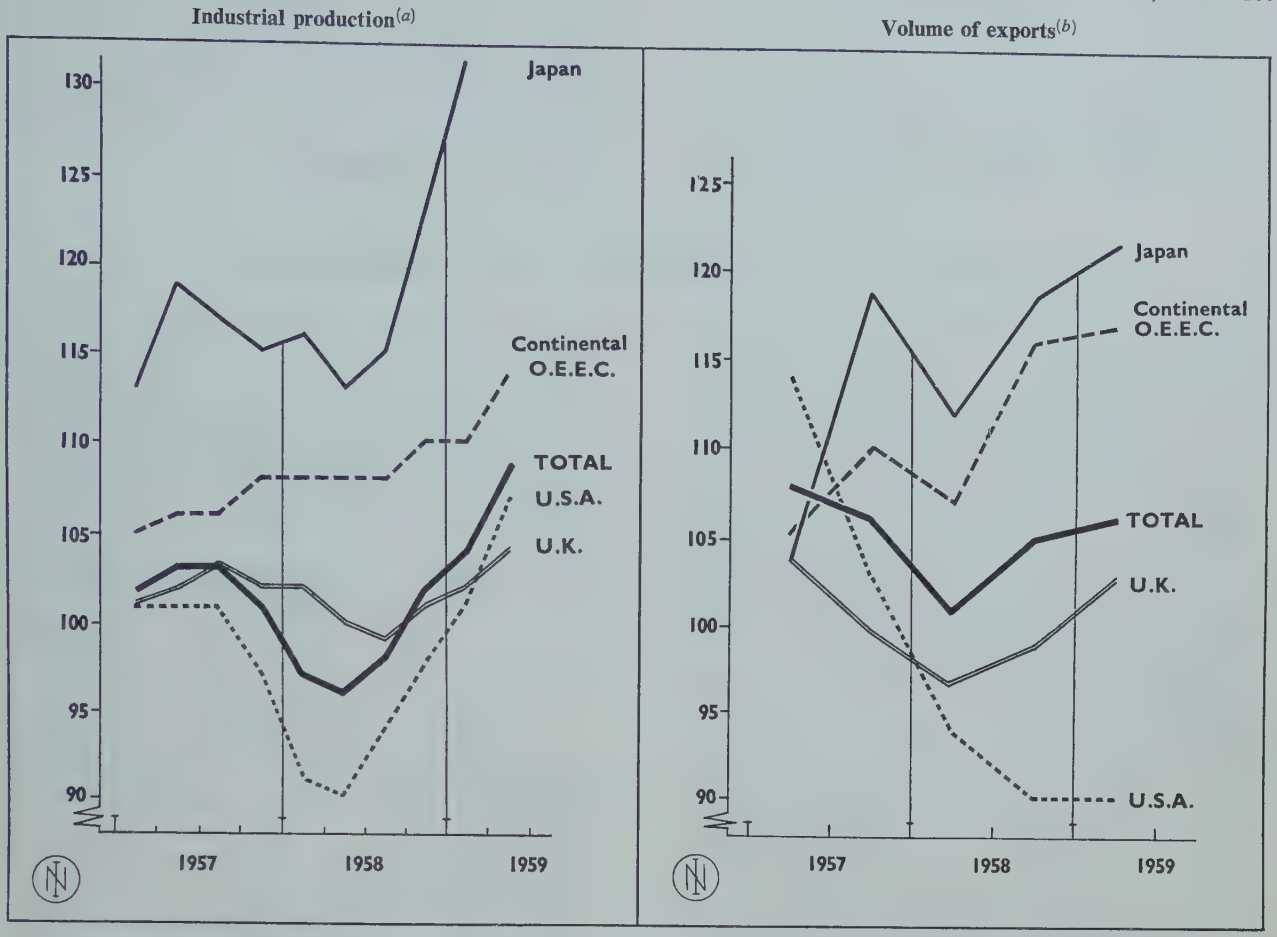
Estimates of total exports of manufactures by the main industrial countries and of their share in the market are given in Appendix table 19[2]. The United States share of the market declined again in the first half of the year. Britain's share (after allowing for the effects of the dock strike in June 1958) recovered slightly after a trough in the middle of last year ; the shares of Germany, France and Japan all improved again. The improvement in the share of these countries, and the decline of the United States share, partly reflects the fact that their exports to the United States rose sharply. But even if the United States

[1] See *Appendix table* 5.

[2] A more detailed analysis of previous changes in the share in the export market for manufactures, with special reference to the United States share, was given in an article on ' The Dollar ' in the *National Institute Economic Review*, no. 2, pages 18-22.

Chart 3. Industrial production and the volume of exports : international comparisons

Index numbers, 1956 = 100



Source : *Appendix table* 16, *OEEC General Statistics*, *International Financial Statistics*, and national sources.

(a) Seasonally adjusted, plotted quarterly.
(b) Not seasonally adjusted, plotted half-yearly.

market is excluded from the calculation, the United States share in exports of manufactures fell between the second half of 1958 and the first half of 1959 by about 1 percentage point, from 27 to 26 per cent of the total. Full details of the regional pattern of the trade in manufactures are not available, but the United States probably did not hold its share in the expanding European market.[1] In June and July there appears to have been some improvement in the United States export performance. In these months her total exports were for the first time this year higher than a year earlier.

During 1958 Japanese export prices of manufactures fell by 7 per cent because of lower textile prices and those of France fell 4 per cent as a result of the devaluation in August 1957. There was little change in British or American prices, but German prices fell a little at the end of the year.[2] At the beginning of this year there was a fall of almost 10 per cent in French export prices of manufactures in terms of dollars as a result of devaluation, which was partly counteracted by a rise of 4 per cent in the second quarter. British, American and German prices were stable in the first half of the year.

The outlook for British exports

As noted earlier, British exports to the overseas sterling area rose in the second quarter and the prospects for exports of the sterling area now appear good. As a result of the recovery in their earnings a number of sterling area countries have relaxed import restrictions. New Zealand and Rhodesia made concessions some time ago. Recently Australia has relaxed her restrictions and Ireland has reduced import

[1] In the first quarter United States' exports of manufactures to western Europe, (including Britain) were 5 per cent lower than a year earlier, while those of Britain, France, Germany and Japan together were about 3 per cent higher.

[2] See ' Trends in exports of manufactures during 1958 and part of 1959 ', *Board of Trade Journal*, 4th September, 1959.

levies. Meanwhile South Africa has adopted a more expansionary general economic policy. One exception is Nigeria, where textile imports have been cut to allow the continued purchase of capital goods for development.

British exports to the Continent should continue to expand as recovery there goes ahead, and exports to Canada should be helped by the Canadian recovery. There have been some notes of caution recently about the prospect for British cars in the United States market. Dealers' stocks, especially of British cars, are said to have risen considerably, and the major American manufacturers are introducing their new smaller cars this autumn. But, in total, exports to the United States should continue to rise, although perhaps not at the recent pace.

TRENDS IN PAYMENTS AND RESERVES

The recovery in the industrial countries and consequent improvement in the payments position of the primary producing countries has caused the outflow of reserves from the primary producing countries to be reversed. This change in the pattern of international reserve movements has been outweighed, at least in the public eye, by the continuing outflow of reserves from the United States and by the movement of short term funds between the United States, Britain and other European countries induced by changes in interest rates and other motives. These various movements are analysed in the following paragraphs.

In the past two years the balance of payments and flow of reserves between industrial countries and primary producing countries have been following the cyclical pattern typical of an international trade cycle.

As shown in earlier issues of this Review, the slackening of demand in the United States, Europe and Japan in 1957 and 1958, and the fall in primary prices that accompanied it, caused a marked fall in the export earnings of the primary producing areas. Although their loss of foreign earnings was cushioned by an increase in the supply of loans and aid, their foreign payments position deteriorated. They were therefore compelled to reduce their imports by deflation or controls ; but in the interval before their policies of import restriction took effect, they lost reserves. The industrial countries, on the other hand, gained reserves but suffered in their export trade in the face of the fall in demand in the primary producing countries. In broad terms, taking the primary producing countries as a group, this phase lasted through most of 1958. Since then the recovery in the industrial countries has, as shown earlier, caused some recovery in primary prices and in the foreign earnings of primary producing countries notably in the sterling area. The countries that have benefited have begun to relax import restrictions. But in the interval before trade responds and higher payments are made, they have been regaining reserves from the industrial countries.

The flow of reserves from and to the primary producing countries can be seen in table 5, which shows the changes in reserves of major areas from 1957 to mid-1959. The figures cover gold, dollars and sterling. The position of Britain and the United States is shown net of liabilities : increases in the sterling and dollar reserves of other countries are also counted as negative items in computing the change in the reserve position of Britain and the United States.

Table 5. Changes in holdings of gold, dollars and sterling[a]

$ billion

	Year		1st half	
	1957	1958	1958	1959[b]
United States[c]	+0.6	−3.2	−1.5	−3.1
Canada	+0.1	+0.4	+0.4	+0.1
United Kingdom	+0.5	+0.7	+1.0	−0.2[d]
Continental western Europe	+0.8	+2.8	+0.7	+0.6
Japan	−0.5	+0.4	+0.2	+0.2
Total industrial countries ..	**+1.6**	**+1.0**	**+0.8**	**−2.3**
Overseas sterling countries ..	−0.3	−0.2	−0.3	+0.4
Latin America[c]	+0.2	−0.4	−0.1	+0.1
Other primary producers[e]	−0.3	—	−0.1	+0.1
Total primary producers ..	**−0.4**	**−0.6**	**−0.4**	**+0.6**
International institutions ..	−0.5	+0.5	+0.1	+1.9
Residual[f]	*−0.7*	*−0.9*	*−0.4*	*−0.2*

Source : *Economic Trends, Federal Reserve Bulletin, International Financial Statistics.*

(a) Gold holdings of Central Banks and Governments, all short-term dollar and sterling holdings.
(b) Partly estimated.
(c) The United States figure includes and the Latin America figure excludes sterling holdings of dollar Latin America which cannot be separated from United States holdings.
(d) Change in official gold and currency reserves (including currencies other than the dollar) less change in sterling liabilities. The Federal Reserve Board's estimate of British gold holdings in the second quarter is not yet available.
(e) Including changes in sterling holdings of Sino-Soviet bloc.
(f) New gold production, gold transactions with Sino-Soviet bloc (changes in dollars held by the Sino-Soviet bloc are negligible) and net movement of gold in or out of private holdings.

In 1957 the primary producing countries and Japan lost reserves whilst the United States, Britain and western Europe gained. The international institutions were net suppliers of reserves. Indeed the I.M.F. and I.B.R.D. disbursed $0.6 billion to the primary producing countries. But for that, and for a gain in

reserves of $0.5 billion by Venezuela, the primary producers would have lost $1.5 billion instead of the $0.4 billion shown in the table. The outflow of reserves from the United States ceased, as a result of the abnormal purchases made in the United States following the Suez crisis and for other temporary reasons. Britain lost gold and dollar reserves as a result of speculation in the third quarter of the year, but by the end of the year the outflow had been reversed ; in addition her liabilities were reduced as the primary producing countries drew on their sterling balances.

In 1958 the outflow from the primary producing countries continued, but in the first half of 1959 it ceased and gave way to a considerable inflow. The greater part of the inflow accrued to the overseas sterling area which, as noted earlier, has enjoyed a greater recovery in its export prices and earnings than other areas. Since the extra reserves were held largely in sterling, Britain's liabilities rose by some £125 million in the first half of the year. At the same time her gold and dollar reserves rose despite the payment of £58 million to the I.M.F. to meet the increase in the gold portion of the British quota. Indeed the advantages of the sterling system have been evident in this period : the adverse effect of the movement of the terms of trade and balance of payments in favour of primary producing countries is, for Britain, cushioned by the fact that the overseas sterling countries bank their extra reserves in London. With few exceptions, other industrial countries in western Europe do not enjoy the advantage of comparable currency arrangements and are more likely to feel the temporary loss of reserves to primary producing countries. But for the present, the flow of reserves from the United States is more important.

The United States' position

In the first half of this year, the outflow of reserves from the United States has been running at a rate of about $1 billion a quarter—excluding the payment made to the I.M.F. for the increase in the United States quota. The figures, seasonally corrected, are given in table 6. Export receipts fell in the first quarter and though they levelled out in the second quarter, import payments then rose sharply. As a result of these changes and of some decline in military expenditures abroad, the current account surplus was eliminated. On the other hand, the net outflow of private capital declined, principally as a result of the rise in United States interest rates. New foreign issues were down heavily compared with the first half of 1958, when they rose to a very high level while interest rates were low. Direct investment abroad, which is mainly determined by long-term considerations, remained fairly stable, with Europe taking a

Table 6. U.S. balance of payments (excluding military grant aid)

$ billion, quarterly figures, seasonally adjusted

	1958				1959	
	I	II	III	IV	I	II
Merchandise imports	3.1	3.2	3.2	3.4	3.5	3.9
Invisible and military payments	1.9	2.0	2.1	2.1	2.0	1.9
Private remittances and pensions	0.2	0.2	0.2	0.2	0.2	0.2
Total current payments	**5.1**	**5.3**	**5.4**	**5.7**	**5.7**	**6.0**
Merchandise exports	4.1	4.0	4.1	4.0	3.8	3.9
Invisible and military receipts	1.6	1.7	1.8	1.8	1.7	1.7
Total current receipts	**5.7**	**5.7**	**5.9**	**5.8**	**5.5**	**5.6**
Balance on current account	**+0.6**	**+0.4**	**+0.5**	**+0.1**	**−0.2**	**−0.3**
Government capital and aid (net)	−0.7	−0.6	−0.7	−0.6	−0.6	−0.6[a]
United States private capital (net)	−0.6	−0.8	−0.7	−0.7	−0.3	−0.5
Foreign long-term capital	—	—	—	+0.1	+0.1	+0.2
Outflow of gold and short-term dollar assets (outflow +)	**+0.7**	**+0.9**	**+0.9**	**+1.0**	**+0.9**	**+1.0[a]**
of which gold[b]	*+0.4*	*+1.1*	*+0.5*	*+0.3*	*+0.1*	*+0.4[a]*
Errors and omissions (unidentified inflow +)	*+0.1*	*+0.1*	—	*+0.1*	*+0.1*	*+0.3*

Source : U.S. Department of Commerce.
(a) Excludes $1,375 million subscription to I.M.F. of which $344 million was paid in gold.
(b) Not seasonally adjusted.

larger share of the total. The net outflow of portfolio capital, which is influenced mainly by the movements of stock markets and company profits, declined in the second quarter. United States purchases of European securities declined and foreign purchases of United States securities increased.

Developments in Europe

In 1958, when there was a flow of the reserves from the primary producers too, Europe (including Britain) increased its holdings of gold and dollars (private as well as official) by an amount equal to the United States loss—over $3 billion. In the first half of 1959 the gains have continued, though at a rather lower rate on the Continent than in the second half of last year.

On the Continent, Germany ceased some time ago to accumulate reserves faster than her neighbours. Most Continental countries have recently been gaining reserves, but Italy has been the outstanding gainer until lately when France's reserves have risen steeply. Table 7 shows the figures for holdings of gold and short-term dollars. Figures for Continental countries' total sterling balances, for which national details are not available, are given at the bottom of the table.

The cessation of Germany's inflow of reserves, which in 1956 and 1957 amounted to over $1 billion, is primarily the result of changes in capital transactions (table 8). Her current account surplus, which had risen persistently, declined in the first half of this year. Imports have risen sharply, especially imports of manufactures which have responded to the rise in demand and to liberalisation : the share of finished manufactures has risen from just under 20 per cent in 1957 to 30 per cent in the first half of this year. But exports have risen too and there has been a sharp increase in export orders. Hence it is hard to say whether the reduction in Germany's current surplus—which is still large—is likely to persist.

The increased outflow on capital account was mainly the result of *ad hoc* non-recurrent payments. Repayments of post-war assistance to the United States and Britain reduced foreign long-term investments in Germany. On short-term capital account,

Table 7. Changes in western Europe's holdings of gold and dollars[a]

$ million

	Year		1st half	
	1957	1958	1958	1959
Austria	+ 85	+ 153	+ 14	+ 41
Belgium-Luxembourg	+ 6	+ 340	+ 212	− 5
France	−558	+ 192	− 54	+ 449
Germany	+770	+ 295	− 56	− 231
Italy	+263	+ 679	+ 147	+ 278[b]
Netherlands	− 31	+ 442	+ 256	+ 131
Switzerland	+173	+ 104	+ 10	+ 9
United Kingdom ..	+ 63	+ 850	+ 935	+ 104[c]
Others	− 88	+ 268	+ 71	..[d]
Total ..	+683	+3323	+1535	+1060[e]
Sterling holdings of OEEC countries	+188	+ 314	+ 129	− 288[f]

Source : *Federal Reserve Bulletin, International Financial Statistics, and Economic trends.*

(a) Gold holdings of Central Banks and Governments, and short-term dollar holdings, both private and official.
(b) Change in official reserves of gold and all currencies. The change in dollar holdings, private and official, was +$285 million.
(c) Change in official gold and convertible currency reserves. The change in dollar holdings, private and official, was +$207 million.
(d) Not yet available.
(e) Estimated.
(f) Of which special transactions by Germany − $231 million.

Table 8. Western Germany's balance of payments

$ billion

	1957	1958	1958				1959	
			I	II	III	IV	I	II
Imports, c.i.f.	7.55	7.41	1.84	1.73	1.85	2.00	1.81	2.05
Exports, f.o.b.	8.56	8.81	2.05	2.13	2.23	2.40	2.11	2.39
Services (net)	+0.82	+0.70	+0.21	+0.17	+0.13	+0.20	+0.17	+0.10
Donations (net)	−0.39	−0.39	−0.11	−0.11	−0.09	−0.08	−0.13	−0.14
Current balance	**+1.44**	**+1.71**	**+0.31**	**+0.46**	**+0.43**	**+0.51**	**+0.34**	**+0.30**
Long-term investment abroad (net)	−0.26	−0.44	−0.07	−0.13	−0.07	−0.16	−0.14	−0.20
Long-term investment in Germany (net)	+0.09	+0.02	+0.03	+0.02	−0.03	—	−0.17	−0.05
Short-term capital (net)	−0.45	−0.34	−0.30	−0.06	−0.05	+0.07	−0.71	−0.11
Balancing item	+0.40	−0.19	+0.03	+0.02	−0.05	−0.19	−0.04	−0.06
Capital items	**−0.22**	**−0.95**	**−0.32**	**−0.15**	**−0.20**	**−0.28**	**−1.06**	**−0.42**
Change in official reserves (inflow +)	**+1.22**	**+0.76**	**−0.01**	**+0.31**	**+0.23**	**+0.23**	**−0.71**	**−0.12**

Source : *Monthly Report of the Deutsche Bundesbank.*

there was a large outflow in the first quarter caused by advance payments of $0.4 billion to the United Kingdom and United States for arms and by a rise of about $0.4 billion in dollar holdings of commercial banks, to take advantage of the higher level of United States interest rates. The German central bank encouraged this increase in private foreign holdings by offering a specially favourable rate for forward exchange cover. This practice has now been modified. But the result of this policy was to reduce Germany's official reserves while the private dollar balances rose instead. Long-term investment abroad, which includes fewer special transactions, increased too, but that was largely the result of higher portfolio investment which is volatile and cannot necessarily be relied upon to continue. In sum, a large number of temporary developments caused the decline in Germany's reserves and she is still in a very strong position.

The sharp improvement in Italy's payments in 1958, when she gained $0.9 billion in reserves, was the result of a fall in the value of imports, combined with a continuing rise in tourist receipts and emigrants' remittances. Exports rose slightly and the capital inflow increased. About half the fall in the value of imports was due to lower prices and half to lower volume. The reserve inflow has continued in the first half of the year.

The improvements in France's reserves this year followed devaluation which both induced an inflow of funds (including dishoarding) and improved the current balance. French exports have risen sharply. Imports in the first half of 1959 remained below the 1958 levels. In value (c.i.f.) they recently rose above 1958 levels but were still exceeded by exports (f.o.b.). In other European countries the inflow of reserves has generally continued in the first half of the year despite the fact that the terms of trade have turned slightly against industrial countries and that the primary producing countries have been regaining reserves. Similarly Japan has continued to gain reserves.

There is unlikely to be much change in the position in the months ahead. Recovery, provided—as is likely—it does not lead to violent re-stocking of primary commodities and large increases in primary prices, should not greatly weaken the European reserve position so long as the United States outflow of reserves continues. As shown in our earlier article on 'The Dollar'[1], a large part of the deterioration of the United States balance of payments was caused by the decline in European imports of steel, coal and other materials as excess demand in Europe eased off, and by the expansion of European exports of manufactures at the expense of United States goods in the United States market and in export markets generally. Thus the flow of reserves from the United States to Europe reflects the fact that Europe improved its trading position vis-à-vis the United States. Recovery in Europe, together with less discrimination against dollar goods, may modify the position to some extent, inducing some expansion in United States exports. But the position is unlikely to be reversed. Europe is far from needing to import coal or steel : the basic industries still have considerable spare capacity. And as shown above, Europe's exports of manufactures did better than those of the United States in the first half of the year.

[1] *National Institute Economic Review*, No. 2, March 1959.

Britain's position

The trend in Britain's reserves has been remarkably favourable in the third quarter, which is normally unfavourable. The reserves rose in July and August despite some special payments. The strength of the overseas sterling area's balance appears to have offset the increase in Britain's trade gap, which, as was to be expected, has accompanied this phase of recovery. The outlook for sterling depends upon the development of the balance of the whole area with non-sterling countries. As recovery proceeds, imports from non-sterling countries are likely to rise but, judging by the trend of British and overseas sterling area exports, there are no grounds at present for expecting any great deterioration in the current balance.

Interest rates and flows of funds

Given the relative strength of the trade and payments position of Europe and Britain compared with the United States, it is surprising that the recent increase in interest rates in the United States should have prompted reactions in Europe. United States short-term rates, having increased since the middle of 1958, recently rose more sharply. The increase resulted from the refusal of Congress to allow the Treasury to pay higher rates on long-term bonds and from the continuing tight money policy of the Federal Reserve Board : discount rates have recently been increased. The German discount rate has recently been raised too, and there have been some suggestions that Bank Rate might be raised in Britain.

The increase in United States interest rates since the middle of last year has been accompanied by a considerable change in the composition of the reserve outflow. In the first half of 1958, foreign countries took their gains mainly in gold. Since the middle of 1958 when interest rates began to rise, foreign countries have been increasing their dollar holdings again and the gold outflow has been correspondingly

Table 9. Composition of the outflow of gold and short-term dollars from the United States[a]

$ billion

	1958				1959	
	I	II	III	IV	I	II
Total	**0.4**	**1.2**	**0.9**	**0.9**	**0.6**	**2.4**
Gold	0.4	1.1	0.5	0.3	0.1	0.7
Dollar holdings	—	0.1	0.4	0.5	0.5	1.7
of which :						
Deposits[b]	*0.8*	*0.6*	*−0.4*	*0.1*	*0.2*	*−0.2*
Short-term Government securities[b]	*−0.8*	*−0.4*	*0.8*	*0.4*	*0.3*	*1.8*
Other short-term[b][c]	—	*−0.1*	—	—	*0.1*	*0.1*
Short-term interest rates[d]	1.84	1.02	1.71	2.79	2.80	3.02

Source : *Federal Reserve Bulletin.*

(a) Including transfers to international institutions. The United States subscribed $1,375 million to the I.M.F. in the second quarter 1959 (of which $344 million in gold).
(b) Transfers to United States shown as minus.
(c) Mainly bankers acceptances and other commercial short-term paper.
(d) Unweighted quarterly average of rates on new issues of 3-months treasury bills.

reduced. At the same time foreign countries have switched their dollar holdings between deposits and short-term Government securities as interest rates have changed. In the first half of 1958 not only did total foreign dollar holdings stop rising, but there was a large switch from short-term assets to deposits. Since then, as total foreign holdings have risen, deposits have fallen again : there has been a switch back into short-term assets (table 9).

As shown in table 10, it was holdings of dollar assets by central banks and other official agencies abroad that changed soonest. Whereas in the first half of last year official foreign dollar holdings remained virtually constant in total, they rose by $0.7 billion in the second half of the year and by $0.3 billion in the first half of this year.

The movement of private funds has also been considerable. In the first half of this year, private foreign holdings of short-term dollar assets rose by $0.8 billion, whereas in the whole of 1958 they rose by only $0.2 billion. Since foreign holdings of long-term bonds and securities rose in the first half of this year more rapidly than in 1958, there is no evidence that foreigners were switching from long-term to short-term dollar assets : the increase in short-term assets appears to have come from an inflow of funds across the exchanges. The increase in the residual item, ' errors and omissions ', in the United States balance of payments estimates in the first half of the year points to an inflow of funds too. Such flows are

Table 10. Destination of the outflow of gold and short-term dollars from the United States

$ billion

	1958				1959	
	I	II	III	IV	I	II
To international institutions						
Gold	—	0.01	—	—	0.01	0.34[a]
Dollars[b]	−0.14	0.08	0.03	0.06	0.13	1.08[a]
To foreign countries						
Gold	0.38	1.07	0.49	0.35	0.08	0.34
Dollars	0.16	0.01	0.35	0.45	0.37	0.67
of which						
to official agencies[b]	*0.10*	*−0.09*	*0.48*	*0.25*	*−0.04*	*0.32*
private accounts[b]	*0.06*	*0.10*	*−0.13*	*0.20*	*0.41*	*0.35*
Grand total	0.40	1.17	0.87	0.86	0.59	2.43

Source : *Federal Reserve Bulletin.*
(a) See footnote (a) to table 9.
(b) Transfers to United States shown as minus.

possible as a result of freedom from exchange controls in some countries and as a result of the flexibility with which they are applied in others.

A considerable part of the increase in private dollar balances in the first quarter must reflect the increase in dollar holdings by German commercial banks which was noted earlier. Funds do not appear to have been moved out of sterling on any substantial scale. In the first half of this year, the sterling balances of non-sterling countries declined by £117 million. But this was mainly due to special transactions by Germany. She increased her sterling holdings in 1957 by depositing £67½ million in London against future debt repayments, in effect making a loan to Britain. This year she drew on her balances to pay £22 million in the first quarter for advance payments for arms and a further £22½ million in the second quarter for debt repayment. In addition she transferred £37½ million of her remaining balances into a type of security which is excluded from the published sterling balances. Hence altogether these German transactions explain £82 million out of the total reduction of £117 million between December and June (table 11). The remaining change is small. Comparison of the British reserve figures with the United States estimates of British gold and dollar holdings suggests that in the first quarter British banks and other private institutions may have increased their dollar holdings somewhat. With the general election about to take place, sterling has recently been slightly less strong than it was on the exchanges. But despite the further rise in United States short-term interest rates to about ½ per cent above the British rates, the arbitrage margin between sterling and the dollar has not turned in favour of the dollar because the forward dollar has been at a discount as a result of forward covering. The fact that this discount has not narrowed indicates that there has been little or no speculation against sterling.

All these movements of short-term funds are, however, unimportant compared with the underlying state of the balance of payments and the level of reserves. The important features of the situation are first that the sterling area's balance of payments has been strong and is likely to remain favourable, for the reasons discussed earlier ; and second, that Britain's reserves, having continued to rise during the summer, are relatively high and, like those of other countries, have been supplemented by the increase in I.M.F. quotas. Similarly Europe, largely because of its favourable trade and payments position vis-a-vis the United States, has continued to gain reserves and is generally in a strong reserve position. On the other side, the United States still has a very large overall deficit which, although it may well decline in the months ahead, is likely to remain substantial.

In these conditions there seems to be little ground for suggestions that British Bank Rate should be raised. The Radcliffe Committee has cast doubt on the efficacy of Bank Rate, not only as a means of regulating home demand but also as a means of regulating flows of capital. In any event, so long as the payments position and the trend of the British reserves are favourable, it would be wrong to take steps here, or in other European countries, which would tend to run counter to the requirements of international equilibrium.

Table 11. Overseas sterling holdings of non-sterling countries

£ million

	Dollar area and other Western Hemisphere	OEEC countries	Other non-sterling countries	Total
1958 March	70	279	355	704
June	67	306	364	737
September	67	350	359	776
December	77	372	385	834
1959 March	57	309	397	763
June	66	269	382	717

Source : *Economic Trends.*

THE RADCLIFFE REPORT: A SHORT GUIDE

The Radcliffe Committee's Report[1] *does not contain a summary. The passage below is written for those who will not have time to read the report, but want to know what it said. It is a summary without comment or criticism. It does not aim to cover the whole report, which includes long and valuable descriptive chapters on the financing of public authorities (chapter III) private financial institutions (chapter IV), the work of the Bank of England (chapter V), and on statistics (chapter X). It is, mainly, chapters VI to VIII which are summarised below : they give the Committee's views on the central question of monetary policy. At the end, the Report's main specific recommendations are listed. The references in the left-hand column are to the Report's paragraph numbers.*

How monetary measures work

381–383 1. One must expect monetary measures to work through their effect on total demand. (It is noted, in passing, that they do have ' directional ' effects : that is, they have more impact *386* on some forms of spending than others.) There are two possible effects : the direct effect of interest rates on spending, particularly on investment spending, and, more important, the indirect effect : rises in interest rates, so long as they are not movements of short rates only, *387, 393* can make financial institutions less willing to lend by making them less liquid.

146 2. For instance, if a bank is in a position in which it can only raise its advances by selling bonds before their maturity date, a rise in the rate of interest will mean that, if it did raise *292–294* advances, it would incur a capital loss. Again, when interest rates rise, building societies tend to reduce their lending, because the interest rates they offer tend to lag behind in any upward move, and their inflow of funds is reduced. It is this effect of monetary measures on the *388–391, 397* liquidity of financial institutions in general that matters, rather than their effect on the supply *125* of money.

428 3. The monetary measures the authorities have used—which include direct controls as well as general measures—have been : manipulation of short-term interest rates (but not of *431* long ones) ; funding the floating debt, and so reducing the banks' liquidity ; official guidance— *432, 433* and eventually the fixing of a ceiling—on bank advances ; the restriction of capital issues through the Capital Issues Committee ; and hire-purchase regulations. The authorities have tended, *434, 435* when restricting demand—though not when expanding it—to use a ' package ' of measures, including measures outside the monetary field, such as cuts in public investment.

436–441 4. According to weighty official testimony, which the Committee accepts, the raising of *439* Bank Rate did have effects on foreign confidence (though it was not the traditional effect of attracting short-term funds) ; the ' package ' of measures would not have been as effective in *436, 441* this field without Bank Rate. But Bank Rate's effect was partly symbolic ; it would probably not have had much effect alone ; and it may not be as effective in the future as in the past.

450 5. At home, there is no evidence that higher interest rates increased savings ; on the *471, 397* spending side, the direct effect on investment spending has never amounted to as much as £100 *460, 472* million in a year. The direct restrictions on bank advances produced a ' diffused difficulty of borrowing ', mainly for small businesses : ' pressure here and pressure there, but nothing of great moment '. The large industrial corporations and the nationalised industries were hardly touched either by interest rates or the credit squeeze. The operations of the Capital Issues Committee had no significant effect on home demand. The only one of the monetary measures to have any quick, substantial effect was the regulation of hire-purchase. These judgments, *474* the committee recognised, were impressionistic ; more official research is needed.

How monetary measures should work in the 1960s

486 6. The economy in the 1960s is more likely to be like that of the 1950s than like that of any earlier period—though possibly the world economy may not expand so fast, the demand *478, 480* for capital may not be so strong, and financial institutions, being less liquid, may be more susceptible to monetary pressures.

[1] *Committee on the Working of the Monetary System : Report,* Cmnd. 827. H.M.S.O. 15s. 0d.

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7. Movements of the rate of interest should not be made more drastic. But the authorities cannot leave them alone, either ; they must have a positive policy. Completely stable interest rates would be wrong, because then the whole of the national debt would become as stable in value, and hence as liquid, as a bank deposit. Although interest rates do little to disturb capital plans over fairly short periods, they do enter into long-range capital planning : so ' it is desirable that rates of interest should move somewhat if the demand for capital shows an appreciable rise or fall . . . The authorities . . . should then promote a movement of long rates as well as short '. Thus, in 1953-54, the authorities should have encouraged a rise in long-term rates of interest. But the present reduction of the pressure of demand would not by itself justify a fall in rates. Monetary policy should not be a major short-term stabiliser, but—while paying attention to the short-term situation—the authorities should take a view of what the long-term economic situation demands.

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8. The difference from policy up to now is that the Bank of England should work on long rates rather than short ones ; and also that it should say what it is doing.

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9. For the banks, the convention that their liquid assets should be 30 per cent of their deposits should be made explicit. Otherwise, in normal circumstances, special restrictions to restrain bank lending should not be imposed unless they are also imposed on other financial institutions ; and such a widespread extension of restrictions would not normally be justified ' since we envisage the use of monetary measures . . . in ordinary times playing . . . a subordinate part in guiding the development of the economy '. But such restrictions might be justified if the authorities found themselves persistently embarrassed by excessive liquidity over a long period.

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10. Capital issues control should not normally be used ; hire-purchase controls are not recommended for normal times either—unless for some reason the severe effects on consumer durables' industries are wanted.

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11. In ' emergencies ', other monetary measures are permissible. If there were the threat of a head long inflation, three measures are recommended : a stern control of capital issues—for instance, a ceiling on all issues for the private sector over a period of, say, three months ; direct restrictions on bank advances—with a mild preference for restricting the proportion of advances to deposits for each bank, rather than an absolute limit ; and hire-purchase restrictions. The idea of some statutory limitation on the supply of money is rejected.

Management of the National Debt

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12. The authorities' policy has been to fund—that is, to lengthen the average life of Government securities—as much as possible. The Committee thinks that a point might come when a policy of funding might leave the City starved of Treasury bills.

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13. But the authorities—for most of the period—have not tried to determine the long-term rates of interest. They have not tried to force them up (*a*) because it would be bad for ' Government credit ' ; (*b*) because they feared a ' perverse reaction ' : they feared that the market, seeing interest rates rise and values fall, would expect them to fall further and would buy fewer bonds, and not more. However, in 1957-59, the authorities did, in effect, lead the market, and prevent a fall in interest rates.

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14. The basic principle of debt management, in the Committee's view, should be ' to push the rate of interest to a level that is high enough to attract sufficient firm holders for the debt and is yet consistent with a balance between demand in the public sector, demand in the private sector, and the available resources of the economy '.

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15. This could be difficult if the ' perverse reaction ' which the authorities fear is unavoidable : but, in the Committee's view, this reaction could be avoided if the authorities explained what they were doing. The Committee gives little weight to the idea that the rate of interest measures ' Government credit '.

570 16. The Committee doubts whether the market does have some instinct for a ' normal ' level of the long-term rate. It sees three factors dragging bond yields up : the steady increase in the debt (a novelty in peacetime) ; the expectation of continuing inflation, and the shift
577 (independently of inflation fears) towards equities. It may therefore be that a continuance of moderately high rates (judged by earlier standards) is reasonable even when production is slack.

Monetary system : international aspects

611 17. In general, the changes in monetary policy have been forced on the authorities by movements in the reserves, whether or not the domestic situation needed correcting. The
630 reserves position has been unsatisfactory throughout the post-war period. The committee's view is that it would be better to increase the reserves than to reduce the liabilities—since the liabilities are other countries' reserves ; and that it would be better to ' reinforce international liquidity ' than to build up additional reserves on a very large scale, necessarily at the expense of other countries.

671 18. For the western world generally, reserves have failed to rise as fast as trade and
667 payments, and the only reason there has not been a major international liquidity crisis is that
673–674 the United States has behaved as a good creditor. The best way to improve international
678 liquidity is not by raising the price of gold but by improving the operation of the I.M.F.

683–684 19. Even so, there might still be a liquidity or a dollar crisis, though it seems less likely than it did. If there were a persistent, large-scale flow of gold to one important creditor
689 country, this ' would warrant the reinstatement of discriminatory measures, including if necessary limitations on convertibility.'

695 20. To deal with pressure on the reserves, the authorities have these weapons : (*a*) Bank
703–707 Rate : already discussed. (*b*) Support of the forward exchange rate : the committee do not
708–718 recommend ' pegging ' the rate continuously, but do not rule out occasional support of the rate.
719–722 (*c*) Devaluation : only to be used if other measures fail. (*d*) A fluctuating rate of exchange :
723–730 not recommended. (*e*) Administrative controls : control over capital movements should be retained ; the Committee assumes that import controls will be a weapon which the authorities,
731 under international agreements, can use if necessary. (*f*) Control of overseas investment : the Committee accepts the need for this, but thinks the country should aim at a current balance
734 of payments surplus of £450 million a year, so that overseas investment could be increased.
745 The Committee welcomes other sterling countries' non-sterling borrowing, and envisages that
747 the United Kingdom might conceivably float stock issues abroad in order to strengthen the reserves.

SPECIFIC RECOMMENDATIONS

The Bank of England

771 1. The announcement of a change in Bank Rate should be made in the name of the Chancellor of the Exchequer and on his authority.

773 2. A Standing Committee should be constituted ' to keep under review and advise the authorities on all matters relating to the co-ordination of monetary policy as a whole '. The Chairman would be the Chancellor of the Exchequer, with the Economic Secretary to the Treasury as his deputy ; its members would be four representatives from the Bank, four from the Treasury, and two from the Board of Trade.

785–787 3. If this were done, there would be advantage in retaining the office of part-time Director of the Bank of England.

776 4. There should be in the Bank a strong and highly qualified Economic Intelligence Department, whose head should have the rank of Executive Director.

366–367 5. The Bank should publish a few important figures regularly and frequently, and should improve its annual report.

474 6. The Bank should be explicitly charged with the duty of a continuous study of the effects of monetary measures ; these studies should be published.

Management of the national debt

556 7. There should not be specific and detailed statutory or Parliamentary regulation of the Treasury's management of the national debt.

573 8. The Treasury should not issue ' index bonds ' —that is, bonds linked to the cost of living—unless it were in a very tight corner.

580 9. When making new issues, the authorities should announce the manximum amount, as at present, and also say how much had been sold outside ' the Departments '.

582 10. The figures of the Government broker's net transactions in Government bonds should be published quarterly.

590 11. The discount houses should not indulge in practices designed to discourage outside operators from tendering for Treasury Bills.

591–595 12. The present system of financing nationalised industries should be continued. The idea of some form of equity issue is rejected.

596 13. Since it is undesirable that local authorities should borrow large sums at short-term, the Exchequer should provide long-term capital at the current gilt-edged rates from the Public Works Loan Board 'to any local authority that is not able or does not want to raise the money it requires in the market . . . at a comparable rate '.

601–602 14. The interest rates on National Savings issues might possibly be a little more flexible.

Balance of payments

614–615 *628–629* 15. Reserves and liabilities should both be published in a single monthly statement ; the liabilities should exclude private holdings and official holdings for non-monetary purposes. The statement should also include drawings on or payments of international credit. There should be a fuller quarterly statement which should include all liabilities and which on the assets side should include, for instance, official dollar holdings of all kinds and working balances held abroad by banking, insurance and commercial organisations.

Statistics

858 16. There are extensive proposals for the improvement of statistics, which should be published in a new Digest of Financial and Monetary Statistics.

805–807 *808–810* 17. *Statistics of financial institutions :* there should be summary tables of each major group's purchases and sales of financial assets, and a table showing the flow of funds between financial institutions and the rest of the economy; suggestions are made for further figures from the commercial banks other than the London clearing banks, and from the Scottish banks ; from discount houses ; from insurance companies ; from pension funds ; from building societies ; from investment and unit trusts ; from finance houses ; from the Stock Exchange ; and from trust funds.

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850–851 *850* *854–856* *852* *853* *854* *855* 18. *Statistics in the public sector :* there should be a quarterly capital account of the public sector ; separate quarterly capital accounts of the central government, of public corporations and of the local authorities ; and annual statements on the public sector's financial assets and liabilities. There should also be improvements in the statistics of the national debt, regular forecasts of public corporations' capital expenditure and an annual survey of local authority borrowing.

799, 802 *802* *834–836* *841–848* 19. *Other statistics:* there should be improvement in the statistics of employment, stocks, investment intentions in distribution and consumers' plans for the purchase of durable goods. There should also be improvements in figures of company finance, especially for unquoted companies and private businesses, and also in the figures for overseas transactions, especially for capital items.

Monetary institutions

867–898 20. The Export Credits Guarantee Department should not regard its maximum period of cover as unalterable ; but it should not give longer export credit guarantees as a device for development assistance or competition trade promotion in a world recession.

899–931 *942* 21. The banks should be ready to offer term loans instead of overdrafts to farmers and to small businesses.

946 22. The upper limit on the size of transaction permitted to the Industrial and Commercial Finance Corporation should be raised.

948–952. 23. An Industrial Guarantee Corporation might possibly be set up which would guarantee a proportion of any loan made for the commercial development of a new invention.

953–964 24. If existing institutions do not soon move to develop a simple service for the transfer of internal payments, then possibly a ' giro ' system might be set up in this country by the Post Office.

THE DEMAND FOR INDUSTRIAL MATERIALS, 1950-57

(*A short summary of this article is given on page 43*)

INTRODUCTION

Only eight or nine years ago, at the time of the Korean war, it was widely believed that there would be a continuing world-wide shortage of many primary products; that there was a long-term tendency for the prices of primary products to rise faster than the prices of manufactured goods; and that, as a consequence, the terms of trade were bound to go on turning in favour of primary producing countries and against manufacturing nations such as Britain.

This has not happened: the primary producing countries' terms of trade have not improved, and the purchasing power of their total exports[1] (excluding oil) was only 3 per cent higher in 1955-57 than in 1950. This is not because there has been economic stagnation in the industrial countries; from 1950 to 1955-57, world industrial production[2] rose by some 5½ per cent a year.

It is now widely argued that the position of the primary producing countries is a chronically weak one; it has been pointed out, for instance, that economic growth in the primary producing countries, in so far as it depends upon exports of primary products to the industrial countries, is unlikely to advance as rapidly as the expansion of the industrial countries themselves.[3] This is because the industrial countries' demand for imports of primary products tends to grow more slowly than their national incomes. It is well known that the demand for basic foodstuffs grows more slowly than real income. The same is true for many industrial materials; the changing pattern of industrial output, and the increasing share of processing in the final product, make the developed economies less dependent on imports of basic materials. Further, the consumption of man-made or processed materials has risen substantially; these are produced mainly within the industrial countries themselves and take the place of imports of natural products. For certain commodities and in some industrial countries, governments have stimulated or protected primary production at home at the expense of imports.

There are forces working in the opposite direction. In particular, rising costs have made it unprofitable to push the output of some primary products within the industrial areas beyond a certain point and have compelled recourse to imports. This happened in Britain in the nineteenth century and there is a tendency in this direction in the United States today, although it has been interrupted by the desire to protect domestic producers. Again, the rapidly growing use of oil as a source of fuel and power is increasing the dependence of the industrial economies on a narrow group of primary producing countries.

But it appears that, on balance, the industrial countries have been able to raise output and real income with a diminishing proportion of imports from primary producing countries. Thus, from 1948 to 1955-57, real income in the industrial countries[4] rose by about 45 per cent; primary producing countries' exports rose 40 per cent if oil is included and 25 per cent if it is excluded.[5] This is not just a post-war development ; indeed, it was even more marked before 1948. Comparing 1928 with 1948, and using figures of output of goods of all kinds[6] (since national income figures are not available) industrial countries' output rose 45 per cent; but primary producing countries' exports, including oil, rose only 10 per cent, and if oil is excluded there was no rise at all.[7] So in both periods there was a divergence between the rise in output in industrial countries and the volume of primary producing countries' exports; but the divergence was much bigger in the earlier period.

This is probably because, in the earlier period, most of the rise in output occurred in the United States, during the war. The United States depends much less on imports than Europe does, and in any event she had in the war to use her own resources. Further, the pre-war period was one in which Germany, Italy and Japan were all following autarkic policies, and in general it was a period of increasing protection. The period following 1948, on the other hand, was one in which the fastest economic growth took place in countries outside the United States, whose dependence on imports is greater than hers ; further, since 1948 there has been a general lowering of trade barriers.

This article was prepared by Mr. J. A. Rowlatt and Mr. F. T. Blackaby, of the National Institute, with the assistance of a number of other members of the Institute staff.

[1] Value of exports of primary producing countries divided by index of world export unit value for manufactures. Source: *World Economic Survey 1958* (United Nations, 1959), table 18, page 55.

[2] Excluding Sino-Soviet countries.

[3] See especially recent annual and other reports of G.A.T.T. and *World Economic Survey 1958* (United Nations, 1959), introduction and chapter 1, where this argument is developed. This Survey contains a valuable study of both short- and long-term trends in trade in primary products.

[4] North America, western Europe, and Japan.

[5] *World Economic Survey 1958*, table 1, page 17.

[6] Agricultural, manufacturing, and mining production.

[7] *World Economic Survey 1958*, table 1, page 17.

The long-term tendency for the demand for primary products to rise comparatively slowly is a major obstacle to economic development within the primary producing countries. It is one reason why their rate of development lags behind that of industrial nations, and why they so often experience balance of payments difficulties when they try to accelerate development. Their exports tend to rise more slowly than real incomes in industrial countries: at the same time their demand for imports tends to rise at least as fast as, and often faster than, real incomes in their own countries; this is partly because the process of development requires large imports of capital goods and materials, and the saving of imports only comes later. These difficulties may be solved temporarily by an improvement in their terms of trade, induced by shortages or temporary periods of stock-building—as occurred immediately after World War II and again at the time of the Korean War. They may also be reduced a little by the transfer of some of the earlier stages of raw materials processing to primary producers: instances are the manufacture of burlap from jute in India and Pakistan, the production of veneers from hardwood in Malaya, Ghana, and South Africa, the tanning of hides in India, and the production of woodpulp in New Zealand. But in the long term, if the flow of foreign loans and aid does not increase, the primary producing countries are likely to find that the slow rise in their export earnings continues to inhibit their rate of growth.

The present article examines one part of this general picture. It looks at the demand for major industrial materials from 1950-52 to 1955-57, a period beginning with the boom in primary products at the time of the Korean War and ending just before the international recession of 1958. The article does not cover foodstuffs, and, on the supply side, it limits itself to a study of the areas from which supplies come; it does not examine in detail the increases in mining and agricultural capacity. The first part analyses the trends in the consumption of raw materials in the principal industrial areas. The second part examines the changes in the sources from which the industrial areas drew their supplies.

Statistical basis[1]

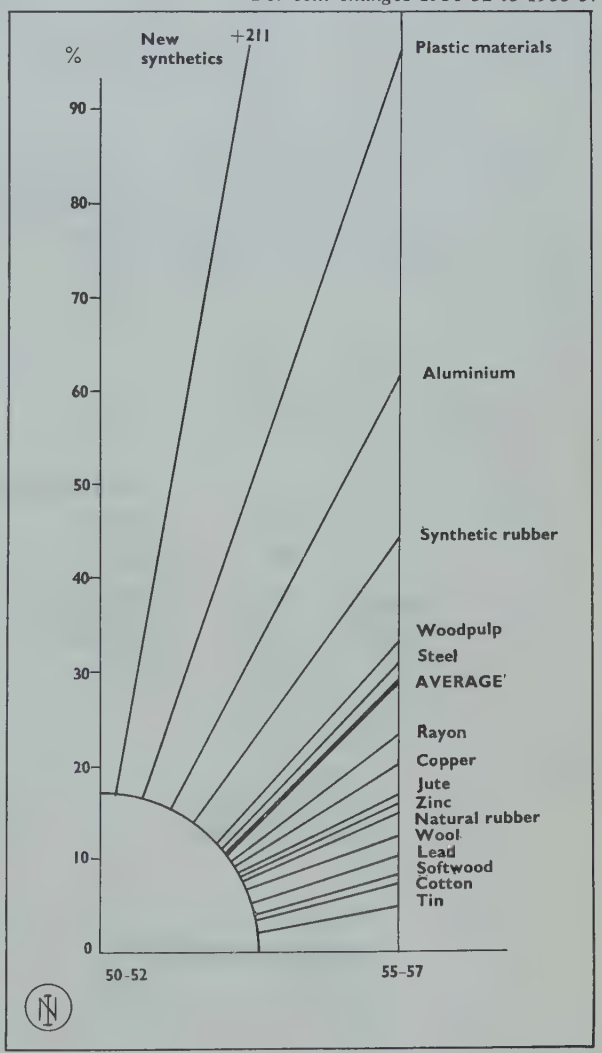
The sixteen industrial materials examined fall into five groups:

(a) the principal agricultural materials—cotton wool, jute and natural rubber;
(b) the traditional non-ferrous metals—copper, lead, zinc and tin;
(c) forest products—woodpulp and softwood;
(d) steel;
(e) 'processed' materials—aluminium, synthetic rubber, plastic materials, rayon, and the new synthetic fibres such as nylon and Terylene. (Throughout this article, the term 'new synthetic fibres' is used to describe the non-cellulosic man-made fibres.)

The first two groups are important sources of export income to primary producing countries, although most of the products included—except for natural rubber, tin and jute—are also produced within the industrial countries themselves. The other three groups are mainly produced within the industrial areas;[2] some of the basic materials for steel and processed materials come from primary producing countries, but their primary content is comparatively

Chart 4. The rise in the consumption of materials in the industrial areas

Per cent changes 1950-52 to 1955-57



Source: *See Appendix to article.*

[1] See the appendix to this article, page 44, for a more detailed description of the methods used.

[2] The special position of Scandinavia and of forest products is considered on page 42.

small.[1] These sixteen materials, between them, cover nearly four-fifths of the imports of industrial materials (excluding fuels) into the main industrial areas,[2] about two-fifths of primary producing countries' total exports of goods of all kinds to industrial areas, and about one-fifth of their total exports to all areas.

It may appear unorthodox to include steel as a material rather than as a manufactured product; moreover the consumption of steel in industry, whether measured by weight or by value, is so large that it tends to dwarf the other materials. But steel is the material base for a very wide range of manufactures and it is competitive, marginally, with the non-ferrous metals, with timber and with plastics. Hence to exclude steel would be to miss much that is important in the changing pattern of demand for materials.

The five industrial areas taken are: the United States, Canada, the United Kingdom, the European Economic Community countries,[3] and Japan. Estimates of consumption are available for all commodities except steel and plastic materials; the figures therefore exclude the effects of strategic stock-piling in the United States and other countries. But stock movements at later stages of manufacture and distribution are not usually excluded; for this reason groups of years are taken at either end, and the analysis is based on a comparison of 1950-52 with 1955-57. Quantity figures are used for individual commodities; when they are added together, they are valued at 1958 market prices.

[1] Iron ore contributes about 20 per cent to the price of steel, bauxite about 2 per cent to the price of aluminium and wood pulp about 30 per cent to the price of viscose staple.

[2] The main industrial materials which are not included are: fuels, building materials, ceramic materials, hides and skins, some natural fibres, the specialised metals and minerals, and the main materials used by the chemicals industry.

[3] Western Germany, France, Italy, Netherlands, Belgium-Luxembourg.

THE CHANGING PATTERN OF DEMAND

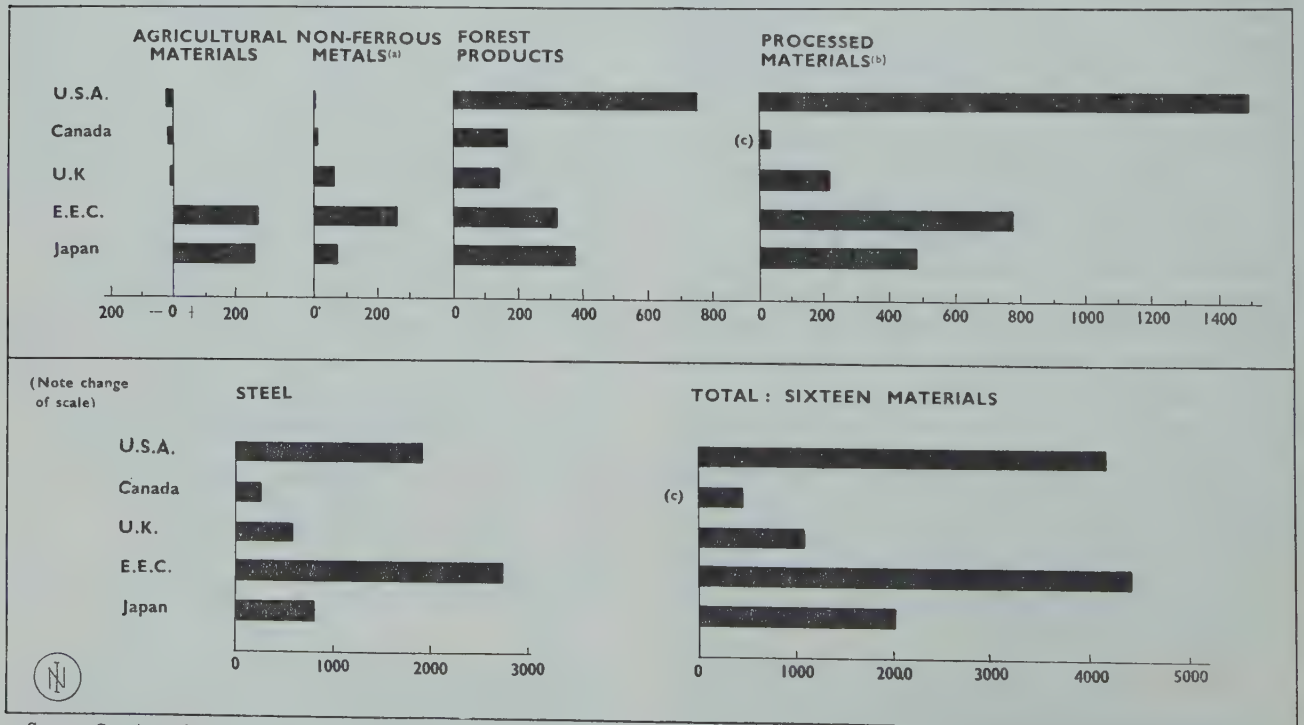
Introduction

There are several reasons for the very different rates of growth in consumption of the major materials illustrated in chart 4.

First, general economic expansion has been faster in some industrial areas than others; this has influenced the changes in demand because materials are of different relative importance in different economies. Second, because of the changing patterns of final demand for manufactured goods, some industry groups have done better than others in each of the industrial areas; in particular the demand for textiles has grown less than the demand for metal products. Moreover, within each of these large industry groups there have been further changes in the pattern of production: for example, in the United States, electrical engineering and aircraft production grew faster than car output, and this affected the demand for steel. Another reason often given for the change in demand for materials is that new methods reduce the amount

Chart 5. The rise in the consumption of materials, by area

Changes from 1950-52 to 1955-57, valued at 1958 prices, $ million



Source: *See Appendix to article.*

(a) Excludes aluminium. (b) Excludes steel. (c) Excludes plastic materials.

of the material needed for a particular finished product—for instance, the amount of tin needed to make a tin can. Generally, however, the effects of such economies in the use of materials are difficult to separate statistically from the effects of the changing demand for final products; they are in any case likely to be fairly small over such short periods as that discussed here. Finally, there has been extensive substitution of one material for another in producing the same kind of product; this can easily be identified in the substitution of synthetic for natural rubber, or of new synthetic fibres for older textile materials, but it is more difficult to identify in detail for metal products because there is not enough information.

Broadly speaking, all these factors except the first—the different rates of growth in different industrial areas—have worked in the same direction; they have allowed output in the industrial countries to grow faster than their demand for agricultural materials and the traditional non-ferrous metals. Chart 5 shows how small a share these two groups have had in the rise in demand for materials. Valued at 1958 prices, they only explain 8 per cent of the increase in consumption of all sixteen materials from 1950-52 to 1955-57; in the base period 1950-52 they accounted for 19 per cent of total consumption.

Area distribution

During the period 1950-57 it was in the EEC countries and Japan that manufacturing output rose

Table 12. The rise in consumption of industrial materials

Per cent change, 1950-52 to 1955-57

	U.S.A.	Canada[b]	U.K.	E.E.C.	Japan	Total
Manufacturing output[a]	**20**	**14**	**19**	**51**	**93**	**28**
Processed materials						
Aluminium	68	8	18	88	124	61
All man-made fibres[c]	36	47	52	46	207	54
of which						
rayon	−1	19	21	21	168	23
new synthetic fibres	152	192	507	515	1,075	211
Synthetic rubber	28	65	900	354	800	44
Plastic materials	69	..	93	196	497	96
Total[c]	**52**	**33**	**53**	**101**	**236**	**67**
Steel	**15**	**42**	**29**	**70**	**108**	**31**
Forest products						
Woodpulp	30	19	36	39	121	33
Softwood	−1	−7	34	22	52	8
Total[c]	**15**	**11**	**35**	**31**	**69**	**21**
Non-ferrous metals						
Copper	1	8	22	65	66	20
Lead	−3	7	12	32	191	10
Zinc	3	—	13	42	83	16
Tin	−3	−17	−3	31	83	5
Total[c]	**—**	**5**	**15**	**51**	**88**	**16**
Agricultural materials						
Cotton	2	−10	−17	11	52	7
Wool	−14	−25	7	22	138	12
Jute	−17	−33	22	22	84	17
Natural rubber[d]	7	5	−2	34	75	15
Total[c]	**−1**	**−10**	**−1**	**19**	**69**	**10**
Total, all materials[c]	**17**	**21**	**25**	**57**	**102**	**29**

Source: *See Appendix to article.*

(a) Adjusted to exclude food, chemicals and basic metals.
(b) Excluding plastic materials.
(c) Valued at 1958 prices.
(d) Including reclaimed.

Table 13. The contribution of each industrial area to the rise in materials consumption, 1950-52 to 1955-57

	U.S.A.	Canada[b]	U.K.	E.E.C.	Japan	Total	Total change		
	Per cent of total change						*Units*	*Quantity*	*Value $mn., 1958 prices*
Processed materials									
Aluminium	68	1	5	23	4	100	*'000 met. tons*	*1,444*	*678*
All man-made fibres	23	2	9	19	47	100	*mn. lbs.*	*1,232*	*977*
of which									
rayon	−2	2	9	20	71	100	*mn. lbs.*	*744*	*349*
new synthetic fibre	61	3	8	17	11	100	*mn. lbs.*	*488*	*628*
Synthetic rubber	59	5	11	23	2	100	*'000 long tons*	*333*	*179*
Plastic materials	46	..	9	34	12	100	*'000 met. tons*	*1,478*	*1,256*
Total[a]	**49**	**1**	**8**	**26**	**16**	**100**			*3,090*
Steel	**30**	**4**	**10**	**43**	**12**	**100**	*mn. met. tons*	*42.4*	*6,403*
Forest products									
Woodpulp	53	12	7	14	14	100	*mn. met. tons*	*9.03*	*1,543*
Softwood	−9	−6	18	34	63	100	*mn. standards*	*2.17*	*291*
Total[a]	**43**	**9**	**9**	**18**	**21**	**100**			*1,834*
Non-ferrous metals									
Copper	3	2	19	64	12	100	*'000 met. tons*	*478*	*272*
Lead	−18	3	19	58	39	100	*'000 met. tons*	*207*	*55*
Zinc	12	—	12	57	19	100	*'000 met. tons*	*313*	*71*
Tin	−37	−12	−12	100	62	100	*'000 long tons*	*8*	*17*
Total[a]	**—**	**1**	**17**	**63**	**19**	**100**			*415*
Agricultural materials									
Cotton	19	−4	−30	37	77	100	*mn. lbs.*	*535*	*186*
Wool	−37	−4	25	66	50	100	*mn. lbs. clean*	*189*	*184*
Jute	−16	−1	37	62	18	100	*'000 long tons*	*87*	*27*
Natural rubber[c]	5	2	−3	69	27	100	*'000 long tons*	*173*	*111*
Total[a]	**−4**	**−3**	**−1**	**54**	**23**	**100**			*508*
Total, all materials[a]	**34**	**4**	**9**	**36**	**16**	**100**			*12,250*

Source: *See Appendix to article.*

(a) Valued at 1958 prices. (b) Excluding plastic materials. (c) Including reclaimed rubber.

rapidly, with rises of about 50 and 100 per cent respectively, compared with rises of about 20 per cent in the United States and the United Kingdom. The consumption of industrial materials, taken together, moved more or less in line with manufacturing output; table 12 compares the rise in manufacturing output with the rises in consumption in each area. The EEC countries and Japan had much more than their proportionate share of the increase in materials' consumption from 1950-52 to 1955-57; between them, they accounted for over half the increase, whereas in 1955-57 they accounted for less than a third of the total. Table 13 shows the contribution of each area to the rise in consumption from 1950-52 to 1955-57; and table 14 shows the division between areas in 1955-57.

Table 14. Distribution of total consumption of industrial materials between industrial areas, 1955-57[a]

	U.S.	Canada	U.K.	E.E.C.	Japan	Total
Processed materials	57.6	3.4	9.4	20.6	9.0	100
Steel	55.4	3.4	10.8	24.8	5.6	100
Forest products	57.3	14.2	5.9	13.4	9.2	100
Non-ferrous metals (traditional)	48.7	3.7	17.0	25.3	5.3	100
Agricultural materials	42.3	2.0	15.2	29.2	11.3	100
Total, sixteen materials	**54.3**	**5.3**	**10.5**	**22.5**	**7.4**	**100**

Source: *See Appendix to article.* Percentages for individual materials can be derived from table 33.

(a) Valued at 1958 prices.

The EEC area and Japan had an even bigger share in the rise in consumption of the ten natural materials —that is, forest products, agricultural materials, and the traditional non-ferrous metals. They accounted between them for more than three-quarters of the rise in consumption for nine out of the ten; the only exception was woodpulp. The EEC countries took over half the increase for natural rubber, wool, jute, and for all four traditional non-ferrous metals. Japan was the biggest source of higher demand for cotton, for softwood, and also for one of the processed materials—rayon.

United States consumption of natural materials hardly rose at all; it was static for traditional non-ferrous metals, it fell for agricultural materials and softwood, and only rose for woodpulp. So, for primary producing countries, it was the rise in demand in western Europe and Japan that was all important in this period. It was only for the processed materials —mainly manufactured within her own borders and with a low import content—that the United States accounted for the largest part of the rise in consumption. She was responsible for about half of the rise in this group, or 56 per cent if rayon is excluded ; United States consumption of rayon fell in this period.

It is clear, therefore, that western Europe and Japan were becoming more important as markets for the primary producing countries during this period not only because their production was rising faster than that of the United States, but also because in the United States the trend away from natural to processed materials was stronger than in Europe. This is discussed more fully on page 28.

The pattern of industrial production

The biggest change in the industrial pattern in this period was that, in each of the industrial areas, the output of textiles either rose less than that of metal goods, or fell. Taking the industrial areas together, the output of metal products rose 37 per cent, while the output of textile products rose only 10 per cent (table 15).[1]

Even in Japan, where there was a 78 per cent rise in the output of textiles, the output of metal products rose faster still—by 99 per cent. Much of this 99

[1] To some extent, the slow growth of textile output in the industrial areas was offset by a more rapid growth elsewhere. Thus world production of textiles (excluding the Sino-Soviet bloc) rose by 14 per cent between 1950-52 and 1955-57, and of metal products by 39 per cent. In the United Nations indices of world production, the industrial areas listed in this article carry 75 per cent of the weight for textiles, but 92 per cent of it for metal products. (United Nations: *Statistical Year Book, 1958*, table 34.) See further on page 40.

Table 15. Manufacturing output and consumption of materials

Per cent change, 1950-52 to 1955-57

	U.S.A.	Canada	U.K.	E.E.C.	Japan	Total
Metals						
Output of metal products[a]	31	13	25	65	99	**37**
Consumption of metals [b][c]	16	35	26	68	106	**31**
of which steel	*15*	*42*	*29*	*70*	*108*	*31*
Textiles						
Output of textile products[d]	−4	−10	−2	24	78	**10**
Consumption of textile materials[b][e]	12	8	9	23	110	**22**
of which						
cotton and wool[b]	*−1*	*−5*	*−2*	*16*	*68*	*9*
man-made fibres	*36*	*47*	*52*	*46*	*207*	*54*
Consumption of textile materials in weight	4	−1	3	19	92	**16**
Forest products						
Output of paper	23	16	28	51	111	**29**
Output of rayon	−4	31	29	38	155	**33**
Consumption of woodpulp	30	19	36	39	121	**33**
New residential construction: dwellings completed[f]	−4	56	39	69	5	..
Consumption of softwood	−1	−7	34	22	52	**8**
All materials						
Manufacturing output	20	17	20	52	110	**30**
Manufacturing output adjusted[g]	20	14	19	51	93	**28**
Consumption of sixteen materials[b]	17	21	25	57	102	**29**

Source: *See Appendix to article.*
(a) International Standard Industrial Classification, 35-38.
(b) Valued at 1958 prices.
(c) Steel, copper, lead, zinc, tin, aluminium—based on figures from table 35.
(d) International Standard Industrial Classification 23.
(e) Cotton, wool, jute, man-made fibres—based on figures from table 35.
(f) In the United States, non-farm dwellings started; in Japan, wooden-frame building construction started.
(g) Total manufacturing output excluding food, chemicals, and basic metals.

per cent rise is accounted for by the increase in exports: exports of machinery formed 23 per cent of total Japanese exports in 1956-57, compared with only 8 per cent in 1951-52. There was a particularly rapid increase in exports of ships and boats, which rose from less than 2 per cent of total exports in 1950-52 to 12 per cent in 1955-57.

The increase in consumption of raw materials of the two industry groups did not diverge as much as their output: in all industrial areas, total metal consumption rose by 31 per cent while consumption of textile materials, natural and processed, rose by 22 per cent. This figure of 22 per cent is high, compared with the rise in output of 10 per cent, partly because of the replacement of natural fibres by synthetic ones. Synthetics have a higher average value; therefore an increase of one pound in the consumption of synthetics will, when valued at 1958 prices, raise total consumption more than an increase of one pound in the consumption of natural fibres.

In the metals group—in which steel predominates—it is only in the United States and Canada that there are substantial differences between changes in the input of metals and in the output of metal products. In the United States, the output of metal products rose 31 per cent, but steel consumption only 15 per cent. The considerable change in the pattern of metal goods output (table 16) explains most of this difference.

Table 16. United States: production and steel content in metal products industries

	Rise in production 1950-52 to 1955-57	Contribution to rise in metal products index	Steel input per $100 net output (a)
	per cent		$
Fabricated metal products ..	+14	+2.9	41
Machinery: non-electrical ..	+19	+6.2	9
Machinery: electrical	+39	+6.4	6
Autos, trucks and parts	+15	+2.5	20
Railway equipment	−23	−0.4	25
Shipbuilding and repairs ..	+ 8	+0.2	9
Aircraft and parts	+133	+6.1	3
Total: metal products(b) ..	+31	+31	

Sources: *Statistical Abstract of the United States, Federal Reserve Bulletin* and *United States Census of Manufactures 1954.*

(a) This gives the value of steel input in 1954 for each $100 of net output.
(b) Including instruments and related parts, and ordnance.

There was a shift, within the metal products group, to industries which use comparatively little steel. It is aircraft and machinery, both electrical and non-electrical, which account for a very large part of the rise in the output of metal products over this period; and, as the third column of the table shows, these are industries which use very little steel in relation to their output of finished goods. Cars and fabricated metal products, with high steel content, accounted for only a small part of the rise in the metal products index.

Similar connections can be found between final demand and the consumption of other materials. For instance, for the industrial areas taken together, the consumption of woodpulp rose more or less in line with the output of rayon (table 15).[1] In the the United States, woodpulp consumption rose rather faster than paper production; this is because it partly replaced waste paper as a raw material. In 1950-52, waste paper accounted for 33 per cent of the input of paper production; by 1955-57 this had fallen to under 29 per cent, and woodpulp had made up the difference.

House building is the most important use of sawn softwood, but there are many other uses and no very direct association can be expected. In the United States in this period there was a fall both in the number of houses completed and in the consumption of softwood. In the United Kingdom, too, association was fairly close. But in EEC countries, the rise in softwood consumption was smaller than the rise in house building, and in Japan it was much greater; the additional softwood in Japan appears to have been used largely in the manufacture of plywood, whose output rose 2½ times from 1950-52 to 1955-57. A large part of this increased supply of plywood was exported to the United States.

Substitution

Throughout this period, processed materials were being substituted for traditional ones on a substantial scale. In all six areas the share of agricultural materials and of traditional non-ferrous metals fell, and in all areas the share of processed materials rose. Part of this change can be explained by the trends in different industries (see page 27); but much of it by the substitution of new materials for old ones. Table 17 below takes the total value of all sixteen materials at 1958 prices, and gives, for each area, the share of each group of raw materials in the total.

It is in the United States and Japan that the substitution of processed for other materials appears to have gone furthest; in Japan it is rayon that explains most of this. If rayon is excluded (as in the bottom two lines of table 17) the United States is well ahead of the other five areas, and Japan ranks below the EEC countries and the United Kingdom in her use of processed materials.

The main substitutions have been aluminium for copper and, to some slight extent, for steel and other materials; man-made fibres for cotton and wool; synthetic rubber for natural; and plastic materials for a wide range of traditional materials—textiles, paper, softwood and metals. Each of these fields of sub-

[1] In most areas, paper is very much more important than rayon as a consumer of woodpulp; in the United States, for instance, paper accounts for nine-tenths of woodpulp's use. In Japan, however, rayon accounts for about five-sixths of woodpulp production.

Table 17. Five groups of materials: share in total value of industrial materials used

Per cent of total value of sixteen materials, valued at 1958 prices

	U.S.A.	Canada(a)	U.K.	E.E.C.	Japan	Total
Agricultural materials						
1950-52 ..	9.1	5.2	19.3	18.2	19.8	12.2
1955-57 ..	7.8	3.8	15.3	13.7	16.6	10.4
Traditional non-ferrous metals						
1950-52 ..	6.0	4.8	10.0	6.7	4.5	6.4
1955-57 ..	5.2	4.2	9.3	6.4	4.1	5.7
Forest products						
1950-52 ..	20.6	56.5	9.9	13.6	28.4	20.6
1955-57 ..	20.3	52.9	10.8	11.4	23.9	19.2
Steel						
1950-52 ..	52.6	28.3	50.4	51.3	36.8	49.9
1955-57 ..	51.5	33.3	51.8	55.4	37.9	50.4
Processed materials						
1950-52 ..	11.7	5.2	10.4	10.2	10.5	10.9
1955-57 ..	15.2	5.8	12.8	13.1	17.5	14.3
Total						
1950-52 ..	100	100	100	100	100	100
1955-57 ..	100	100	100	100	100	100
Processed materials, excluding rayon(b)						
1950-52 ..	8.8	3.2	7.1	5.8	3.5	7.5
1955-57 ..	12.8	3.8	9.7	9.8	8.7	11.2

Source: *See Appendix to article.*

(a) Excludes plastic materials.

(b) As a percentage of the total excluding rayon.

Table 18. Aluminium and other metals

Aluminium, as per cent of copper, lead and aluminium consumption, at 1958 prices

	U.S.A.	Canada	U.K.	E.E.C.	Japan	Total
1950-52 ..	38	35	35	33	25	37
1955-57 ..	52	35	35	37	28	45

Aluminium, as per cent of steel consumption, at 1958 prices(a)

	U.S.A.	Canada	U.K.	E.E.C.	Japan	Total
1950-52 ..	5.2	7.2	7.9	4.5	2.8	5.3
1955-57 ..	7.6	5.5	7.3	5.0	3.0	6.6

Source: *See Appendix to article.*

(a) One ton of aluminium is on average equivalent in volume, or density, to 2.9 tons of steel; the precise equivalent varies according to use. The price of aluminium in 1958 was about four times that of steel, per ton, or about $1\frac{1}{8}$ times that of steel in volume terms.

stitution is considered in turn, with a special examination of experience in the United States where many forms of substitution have been carried further than elsewhere.

Aluminium

Aluminium competes both with other non-ferrous metals and with steel: but its use is only a fraction of the use of steel, even when allowance is made for aluminium's higher cost.

It made substantial gains from 1952 to 1957—but these were not all because of substitution; certainly in the United States the strong rise in aircraft production after the outbreak of the Korean war accounts for a good deal of the gain. It was in the United States that the consumption of aluminium, compared with that of other non-ferrous metals and steel, rose fastest; its use, as a percentage of the use of steel, was higher in the United States than in any other area in 1955-57. In EEC countries and in Japan it gained a little, compared with other non-ferrous metals; but it made no gain at all in either the United Kingdom or Canada (table 18).

Table 19. United States: volume of consumption of non-ferrous metals, by main uses

	Specified use as per cent of total use of metal, 1950-52	Per cent change in consumption, 1950-52 to 1955-57
Copper		
Wire mills	50.1	+13
Brass mills	46.4	−10
Total	96.5	+ 1
Lead		
Bronze and brass ..	2.2	− 3
Storage batteries ..	31.6	− 2
Tetraethyl lead	11.0	+37
Cable covering	11.4	−10
Red lead	7.5	− 8
Solder	7.0	− 7
Total	70.7	
Zinc		
Galvanising	44.3	+ 2
Bronze and brass ..	15.9	−13
Zinc-base alloys ..	29.9	+41
Rolled zinc	6.7	−25
Total..	96.8	+11
Tin		
Tinplate	35.2	+ 3
Solder	24.0	− 5
Bronze and brass ..	23.1	−10
Babbitt	6.2	−14
Total..	88.5	− 3
Aluminium		
Wrought products ..	77.3	+55
of which		
*plate, sheet, strip ..	47.5	+36
*rolled shapes, rod, bar and wire	15.1	+12
*extruded shapes, tubing	13.7	+156
Castings	22.2	+50
of which		
*sand	8.2	−16
*permanent mould ..	7.0	+59
*die-castings	7.0	+126
Total..	99.5	+54

Source: *Metallgesellschaft 1948-57; United States Bureau of Mines and Minerals, 1957*, and earlier issues.

United States experience

Tables 19 and 20 give a more detailed analysis of United States experience. Table 19 gives seventeen different uses for traditional non-ferrous metals; in all but six of the uses, consumption fell from 1950-52 to 1955-57. The table also gives six uses for aluminium; consumption rose in five uses out of the six.

But aluminium did not account for all the ground which the other non-ferrous metals lost. For instance, plastics as well as aluminium replaced lead in cable covering and in sanitary pipes; magnesium took the place of rolled zinc in dry cells and engraver's plates; and the amount of tin used in tinplate hardly changed, while deliveries of steel for use in can manufacture rose 15 per cent; technical developments steadily reduced the amount of tin needed for each ton of tinplate.

Bronze and brass in particular appear to have been displaced—as general all-purpose non-corrosive metals—by aluminium; (all four traditional non-ferrous metals are used in the manufacture of bronze and brass—lead only in small quantities to improve machineability). Aluminium consumption has risen faster than zinc consumption in die-casting—though zinc still has the larger share of the market: zinc-base alloys are very largely used in die-casting. The division of uses in table 19 does not show up aluminium's increasing share in wire manufacture; from 1953 to 1956, the use of aluminium in wire and cable rose from an estimated 70,000 to 100,000 long tons; since each ton of aluminium replaces about two tons of copper in electrical distribution, the rise in aluminium consumption in these three years replaced about 60,000 tons of copper.

The Censuses of Manufactures for 1947 and 1954 provide more detail of the use of copper and aluminium in the metal products industries; table 20 sets out the figures, and also gives figures for steel consumption in the four main divisions.[1] In all four of these divisions, aluminium consumption rose very much faster than that of either copper or steel from 1947 to 1954; by 1954 nearly as much aluminium was used as copper—though its share was, of course, only a fraction of that of steel.

Fabricated metal products accounted for over a third of the increase in the use of aluminium; copper consumption fell in this use. Aircraft manufacture accounted for another third—through expansion of the industry rather than through substitution for other

[1] The Census industries accounted for about three-quarters of copper consumption and about half the use of aluminium; the construction industry—not covered by these Censuses—is also a heavy user of aluminium

Table 20. Copper, steel and aluminium consumption in the United States: selected industries

	Per cent change in volume of consumption 1947-54			Consumption in 1954: '000 short tons			*Per cent rise in production 1947-54*
	Copper	*Aluminium*	*Steel*	*Copper*	*Aluminium*	*Steel*	
Fabricated metal products	**−11**	**+ 72**	**+14**	**191.6**	**394.1**	**21,430**	*+19*
of which							
metal stampings	−27	+ 25		31.8	79.5		
Machinery, excluding electrical	**− 3**	**+ 83**	**+ 4**	**151.1**	**68.5**	**6,675**	*+20*
of which							
refrigeration machinery	+51	+153		38.0	42.5		
valves and fittings (excl. plumbing)	0	+412		56.9	6.2		
motors and generators	+31	+146		50.9	8.3		
Electrical machinery	**− 6**	**+ 93**	**+12**	**322.5**	**45.7**	**2,418**	*+75*
of which							
electric control and other electric appliances	+24	− 47		38.0	4.5		
radios and related products	+74	+261		22.4	14.5		
Transportation equipment	**− 8**	**+186**	**+26**	**118.9**	**192.5**	**11,676**	*+82*
of which							
motor vehicles and parts	−19	− 15		96.6	18.3		
aircraft and equipment	+92	+350		12.1	133.0		
Total of the above	**− 7**	**+ 97**	**+15**	**784.1**	**700.8**	**42,199**	*+39*

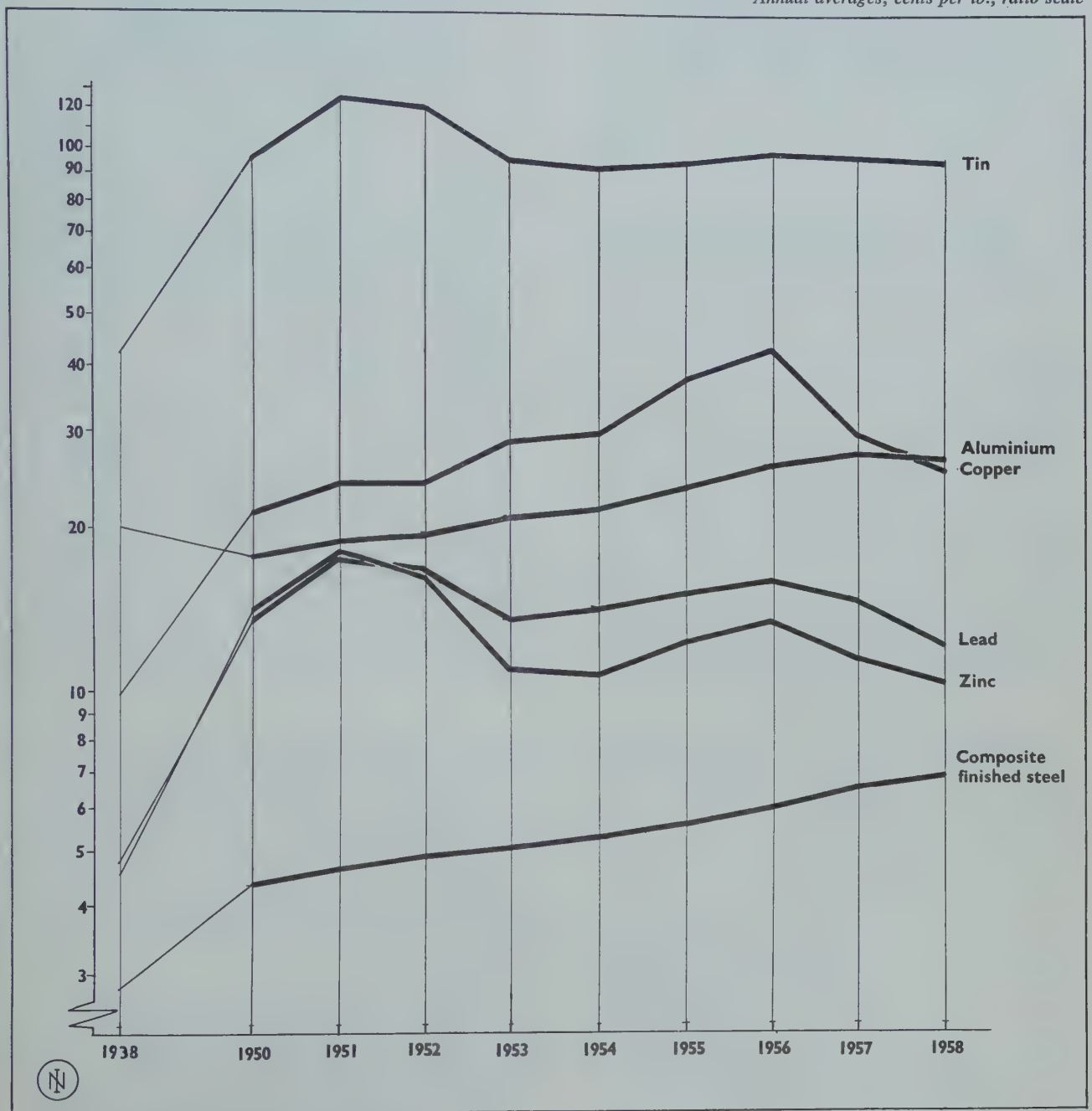
Source: *United States Department of Commerce, Census of Manufactures, 1947 and 1954*, and *Business Statistics 1957*.

metals. The only other sizeable increase in aluminium consumption shown by the Census was in refrigerating machinery. Over these years, 1947 to 1954, aluminium consumption in the motor vehicle industry was falling; but it has risen fast since then. In 1954, motor vehicles and parts accounted for only about 1½ per cent of the use of aluminium in the United States; by 1957, the figure was 10 per cent, or 40 lbs per car.

The main change in the price relationship of these metals occurred between 1938 and 1950 (see chart 6): whereas the prices of all the other non-ferrous metals and of steel rose substantially, the price of aluminium fell. From 1950 to 1956, aluminium's position as

Chart 6. Metal prices in the United States

Annual averages, cents per lb., ratio scale



Source: *Business Statistics* and *Survey of Current Business*.

against that of copper improved further, since copper prices rose faster than aluminium prices; and, in general, aluminium has had the advantage that there have been no violent fluctuations in price, so that producers could feel secure against the risk of stock losses. Yearly variations of 20-30 per cent are not uncommon in the four older non-ferrous metals. But, from 1950 onwards, aluminium gained hardly any further price advantage over steel: steel and aluminium prices have risen at about the same rate.

Textile fibres

Whereas aluminium's gains were mainly in the United States, man-made fibres—in particular the new synthetic fibres—made substantial advances in all areas (table 21). Rayon kept its share of the total, but did not increase it. Wool and cotton lost ground. But the pattern of substitution differed appreciably from area to area.

Table 21. Substitution in textile fibres

Per cent of total use of textile fibres, valued at 1958 prices

	Cotton	Wool	Jute	Rayon	New synthetics	Total	*Total value, $mn, at 1958 prices*
U.S.A.							
1950-52	51	13	1	27	8	100	*2,989*
1955-57	46	10	1	24	19	100	*3,336*
Canada							
1950-52	45	16	1	32	6	100	*152*
1955-57	37	10	1	35	17	100	*164*
U.K.							
1950-52	35	43	4	17	1	100	*909*
1955-57	26	43	4	19	7	100	*994*
E.E.C.							
1950-52	39	32	5	23	1	100	*1,620*
1955-57	35	32	5	22	6	100	*1,999*
Japan							
1950-52	55	14	1	28	1	100	*502*
1955-57	40	15	1	36	8	100	*1,052*
Total							
1950-52	45	23	2	25	5	100	*6,172*
1955-57	40	21	2	25	12	100	*7,545*

Source: *See Appendix to article.*

The new synthetic fibres gained most in North America; at the end of the period their share in this market was over double that in any other country. These gains were mainly at the expense of cotton; but wool and rayon also lost a little.

In the United Kingdom and in the EEC countries, the big changes were in the shares of the new synthetic fibres and of cotton; rayon and wool kept their position more or less unchanged. In Japan, the share of cotton fell more than in any other country; in spite of this, the rise in the total consumption of textile materials was so large that Japan showed the biggest absolute increase in cotton consumption (see table 13). Japan is the one country where rayon, as well as the new synthetics, made a further big advance. Rayon also improved its position in Canada, where wool, as well as cotton, lost ground appreciably.

United States experience

The changing pattern of the use of different fibres in the United States can be traced with some precision. In total, the division of the market between these different fibres did not change a great deal; but there were big changes in individual uses. Table 22 gives the figures, by weight, for the three main uses—clothing (which accounts for about two-fifths of total textile fibre consumption), house furnishings, and industrial purposes.

Table 22. United States: substitution in textile fibres.

Per cent of total use of textile fibres, by weight

	Cotton	Wool	Rayon	New synthetics	Total	*Total, mn. lbs. annual averages*
Total clothing						
1950-52 ..	62	15	20	3	100	*2,414*
1955-57 ..	67	13	12	8	100	*2,632*
of which						
Men's						
1950-52 ..	72	15	11	2	100	*1,261*
1955-57 ..	74	14	8	4	100	*1,362*
Women's						
1950-52 ..	40	16	37	8	100	*860*
1955-57 ..	51	15	20	14	100	*922*
Children's						
1950-52 ..	80	10	10	1	100	*293*
1955-57 ..	80	8	8	4	100	*348*
House furnishings						
1950-52 ..	73	15	12	1	100	*1,242*
1955-57 ..	66	11	19	4	100	*1,510*
Industrial uses						
1950-52 ..	65	5	25	5	100	*1,491*
1955-57 ..	54	3	30	13	100	*1,336*
Total[a]						
1950-52 ..	66	11	20	3	100	*6,130*
1955-57 ..	65	10	19	7	100	*6,442*
Total at 1958 prices						(*$mn.*)
1950-52 ..	48	19	25	8	100	*2,951*
1955-57 ..	44	16	23	18	100	*3,294*

Source: *See Appendix to article.*

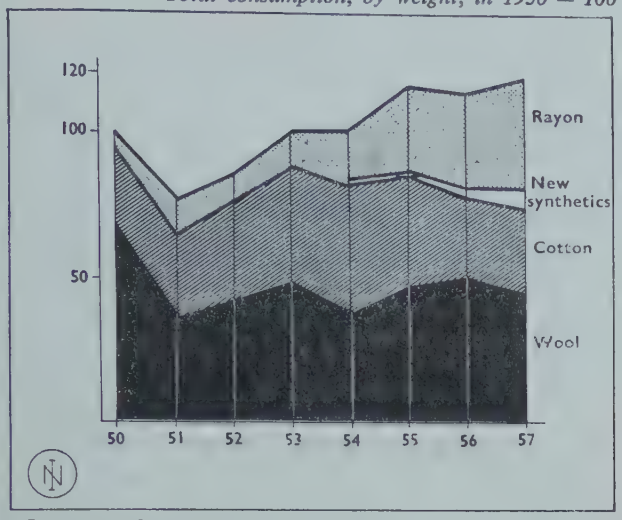
(a) Including exports and other uses, amounting respectively to 298 million lbs. and 666 million lbs. in 1955-57.

Over the period 1950 to 1957, the use of cotton in clothing, especially women's clothing, increased at the expense of rayon. Improved finishes for cotton goods made them more popular. The new synthetic fibres also gained—in clothing as in all other uses. With the trend towards lighter-weight clothing, wool lost ground a little; but it was the consumption of rayon which dropped most heavily; rayon lost nearly half its 1950-52 share.

The picture is the other way round for house furnishings; cotton lost ground, and rayon gained at the expense of both wool and cotton. A large market was built up for the use of rayon in tufted carpets (chart 7); and rayon also made headway in blankets, draperies and slip-covers.

Chart 7. United States: the use of fibres in carpets and rugs

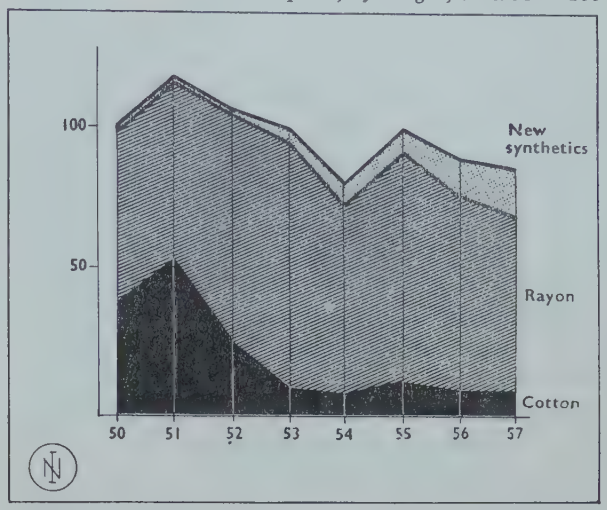
Total consumption, by weight, in 1950 = 100



Source: *Textile Organon.*

Chart 8. United States: the use of fibres in tyre cords

Total consumption, by weight, in 1950 = 100

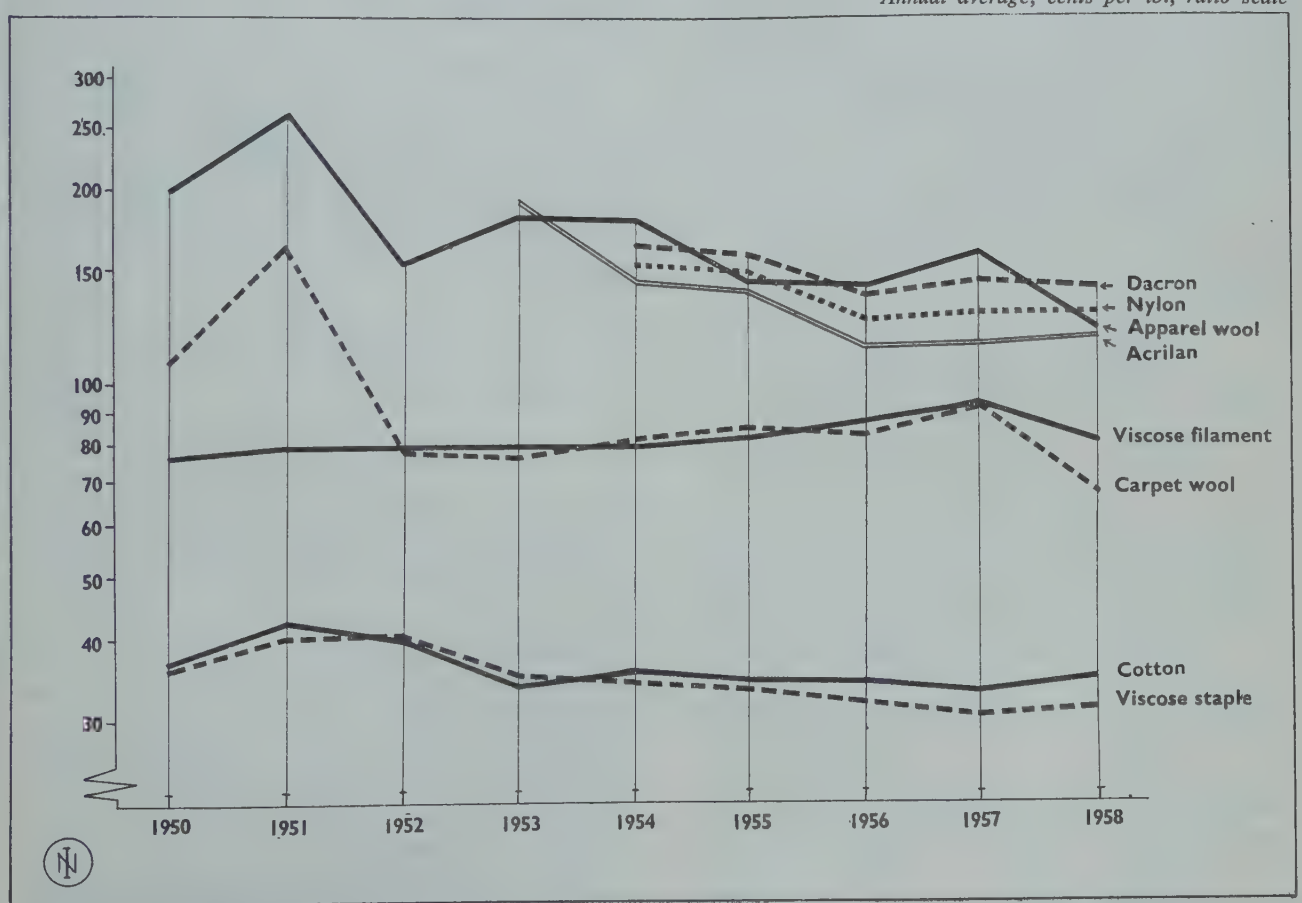


Source: *Textile Organon.*

The industrial market for textile fibres contracted during this period; they were in competition with paper, plastics and rubber in the manufacture of bags and bagging, tents and tarpaulins, hose, insulating material and car upholstery. In this contracting market, rayon displaced cotton to some extent; but the new synthetics showed the biggest gains. The figures for tyre-cord (chart 8), which accounts for

Chart 9. Textile fibre prices in the United States

Annual average, cents per lb., ratio scale



Source: *Wool Situation*, U.S. Department of Agriculture.

about a third of the total industrial use of textile fibres, show how rayon displaced cotton, and then how nylon began to displace rayon.

The gains and losses of cotton and rayon in different fields more or less cancel out; in total, it is only the new synthetics which gained substantially. They account for 91 per cent of the increase in the weight of textile fibres used from 1950-52 to 1955-57 and 106 per cent of the increase in value; it was the lack of supplies rather than of demand which limited their rate of rise. At 1958 prices, they had outstripped wool by 1955-57 (see table 22). Nylon was still the most important of these fibres in 1957, with a productive capacity of 320 million lbs; then came Orlon (100 million lbs), Dacron (the American equivalent of Terylene) 54 million lbs, and Acrilan (45 million lbs). No single use predominated; of the total consumption of new synthetics in 1957, women's blouses, underwear and stockings took 15 per cent, tyre cords 14 per cent, and plastics reinforcement 9 per cent.

The relative movement of prices perhaps accounts for a little of the substitution that went on in this period (chart 9). The high price of wool in 1950 and 1951 may have encouraged substitution; and, although the price of carpet wool fell sharply from 1951 to 1952, it was rising from 1952 to 1957, when the price of viscose staple was falling. The relative movement of cotton prices gave cotton some advantage compared with viscose filament yarn during the period, but not compared with viscose staple. Finally, from 1954 to 1957, the prices of the new synthetics fell rather faster than other textile fibre prices.

Table 23. Consumption of synthetic and natural rubber[a]

Per cent of total consumption by weight

		Synthetic	Natural
U.S.A.			
	1950-52	56	44
	1955-57	61	39
Canada			
	1950-52	40	60
	1955-57	51	49
U.K.			
	1950-52	2	98
	1955-57	16	84
E.E.C.			
	1950-52	7	93
	1955-57	21	79
Japan			
	1950-52	1	99
	1955-57	8	92
Total			
	1950-52	40	60
	1955-57	45	55

(a) Excluding reclaimed.

Synthetic and natural rubber

Synthetic rubber accounts for two-thirds and natural rubber for one-third of the rise in rubber consumption in the industrial countries from 1950-52 to 1955-57; the share of synthetic in total consumption rose in all five industrial areas (table 23).

There were very substantial rises during this period in synthetic rubber's share of the United Kingdom and EEC area's markets. By 1955-57, synthetic rubber—nearly all of it imported at that time—had gained nearly a sixth of the United Kingdom market for new rubber, and over a fifth of the EEC market.

The term ' synthetic rubber ' covers a great variety of products; the gain has therefore been partly due to the possibility of designing particular rubbers for particular purposes. Another reason for the change to synthetic has probably been the fluctuating price of natural rubber; the price of synthetic rubber—like that of most processed materials— has been relatively stable. But chart 10 does suggest that, if the price of natural rubber falls far enough, then there is some substitution in reverse. In 1954, when the two prices were almost the same, synthetic rubber consumption in the industrial areas fell and natural rubber consumption rose.

Plastics substitution: United States experience

The United States accounted for nearly half the total rise in plastics consumption from 1950-52 to 1955-57; it is the more recently developed thermoplastics, in particular polystyrene and polyethylene, which were responsible for most of the rise in sales (table 24).

Table 24. Plastic materials: sales in the United States[a]

mn. lbs.

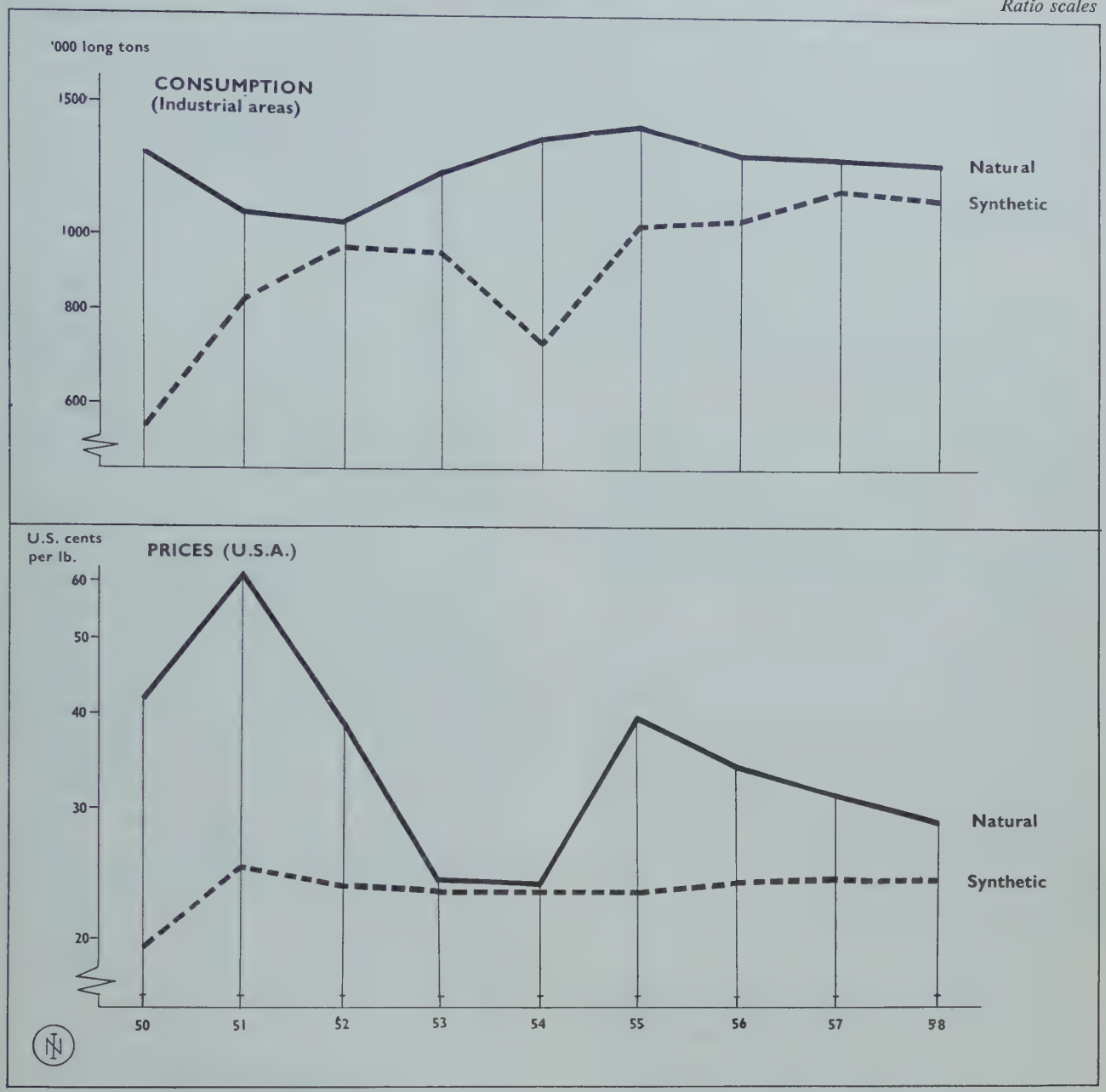
	1950-52	1955-57	*Increase (per cent)*
Thermosetting			
Phenolics	363.7	481.4	+ *36*
Urea and melamine	192.3	308.0	+ *60*
Thermoplastic			
Cellulose	111.4	145.8	+ *31*
Polystyrene	314.7	592.3	+ *88*
Polyvinyl chloride and copolymers ..	363.3	578.7	+ *59*
Polyethylene ..	80.0	501.0	+*575*
Total of those shown ..	1,425.4	2,607.2	+ *83*

Source: *See Appendix to article.*

(a) The figures show only the major groups; they also include export sales. For these reasons they are not exactly comparable with the Appendix figures.

Chart 10. Natural and synthetic rubber: consumption and prices

Ratio scales



Source: International Rubber Study Group.

Plastics are mainly used in the manufacture of consumer goods; but within that field the range of uses and the field of competition with traditional materials is a very wide one. Often it is not possible to say what materials are being displaced; in the toy industry, for example, the use of plastics has enabled manufacturers to develop new lines which in the absence of plastics could not have been produced economically at all. Plastic materials compete not only with older materials, but also with each other, and the picture is rapidly changing. The thermoplastics have partly replaced the thermosetting materials in some applications, such as toys and closures. Thermoplastics will soften when heated, whereas thermosetting materials will not be affected by heat until the temperature is high enough to decompose the compound. This makes for more versatile fabrication techniques for the thermoplastics; it also makes for greater re-use of scrap materials, which has restrained the rise in the consumption of new materials in some applications, such as garden hoses.

Polystyrene's properties at low temperature make it ideal for boxes and trays in refrigerators, and even as a substitute for the vitreous enamel lining: refrigeration and air conditioning equipment was polystyrene's largest single outlet in 1957. Polyvinyl

Table 25. Main uses of thermoplastics in the United States in 1957

Per cent of total use

Polystyrene		Polyvinyl chloride		Polyethylene	
Refrigeration and air conditioning	18	Moulding and extrusion	36	Film and sheeting	32
Packaging	14	*of which*		Moulding, especially housewares	11
Wall tiles	12	*gramophone records*		Wire and cable covering	13
Toys	11	*(33 1/3 r.p.m.)*	*5*	Pipes	7
Gramophone records (45 r.p.m.)	2½	*wire coating*	*13*	Exports	28
Other, including exports	42½	*pipes*	*1*	Other	9
		Film, especially housewares	26		
		Floor coverings	13		
		Fabric treatment	9		
		Other, including exports	16		
Total	100	Total	100	Total	100

Source: *See Appendix to article.*

chloride is used particularly in the manufacture of draperies and covers; about a quarter of its total consumption in 1957 went into uses directly competitive with textiles. Packaging absorbed about 30 per cent of the production of polyethylene, and both polyethylene and polyvinyl chloride are used for wire and cable coverings and for the manufacture of pipe (table 25).

Because the uses of plastics are so varied, it is not possible to assess with any accuracy the quantities of traditional materials which have been displaced. But it is of significance that, taking the industrial areas as a whole, the increase in actual weight of plastic materials consumed was about half as big again as the increase for traditional non-ferrous metals, and about the same as the increase for aluminium. By value, the rise in plastics consumption was more important than that of aluminium and the other non-ferrous metals put together (see table 13).

The Paley report

The general effect of the trend towards processed materials was clearly to reduce the demand for traditional materials. Nonetheless, demand for some of these materials did in fact rise, from 1950-52 to 1955-57, as fast as or faster than was expected at the beginning of the period. The projections of demand in the 'Paley report'—the United States President's Materials Policy Commission—express the expectations at the time of the Korean War most clearly. In table 26 some of the projections of this report, which were made for the period 1950-1975, are applied to the period 1950 to 1956-57 by straight-line interpolation; they are compared with the actual rate of increase in consumption.

It is not of course suggested that the experience of six or seven years is an adequate test of a twenty-five year projection. Nevertheless, the rates of expansion in demand set out in the Paley report represented widely held expectations not only for the long-term, but also for the medium-term future. On the basis of such expectations, substantial increases were achieved in productive capacity, particularly for some of the non-ferrous metals.

Total demand rose faster than expected for five out of the seven materials, including two of the four traditional non-ferrous metals. It was in the division of the rise in demand between the United States and the rest of the non-Soviet world that expectations were most falsified. For all but two of the materials, United States demand rose very much less than expected—and this was not because the United States economy failed to grow; gross national product increased faster than the Paley report expected. In the rest of the non-Soviet world, on the other hand, demand for all seven materials rose very much faster than expected; this appears to be only partly explained by the fact that the rate of growth in this area was unexpectedly fast. The comparison shows again how much more important Europe and Japan were than the United States in raising the demand for traditional materials during this period.

Table 26. The projections of the Paley report and actual data compared

Percentage change 1950 to 1956-57

	U.S.A.		Other non-Soviet world		Total	
	Paley projections	Actual	*Paley projections*	Actual	*Paley projections*	Actual
Gross national product *(at constant prices)* ..	*+20*	+26	*+19*[a]	+39[a]	*+20*	+31
Consumption of:						
Copper ..	*+11*	+ 1	*+12*	+46	*+11*	+24
Lead ..	*+12*	− 8	*+16*	+27	*+14*	+ 5
Zinc ..	*+ 9*	− 6	*+13*	+40	*+11*	+17
Tin	*+ 6*	− 9	*+11*	+22	*+ 8*	+ 2
Aluminium	*+49*	+96	*+53*	+103	*+50*	+100
Steel ..	*+13*	+19	*+16*	+82	*+14*	+41
Rubber(b) ..	*+20*	+10	*+33*	+49	*+25*	+34

(a) G.N.P. in OEEC, in Canada and Japan.
(b) Natural and synthetic.

THE IMPACT ON PRIMARY PRODUCING COUNTRIES

Introduction

The next step is to look at the effect of the changing pattern in the demand for industrial materials on the flow of international trade—and, in particular, at its effect on the volume of exports and the export incomes of the primary producing countries. For this purpose we consider separately the experience of countries which rely heavily on exports of primary products—the principal exporters of agricultural raw materials and metals—and the experience of the semi-industrial countries, mainly Sweden, Finland, and Norway, which supply forest products. This second group is considered separately on page 42; the following paragraphs describe the experience of the first group—the primary producing countries proper.

The main result of the change in demand pattern was to reduce the primary producing countries' share in the input of materials into the industrial areas. Virtually all primary producers' exports of the sixteen materials considered here fall into the two groups whose consumption rose relatively slowly—agricultural materials and the traditional non-ferrous metals; they have hardly any share at all in the three groups of materials whose consumption rose relatively fast—forest products, steel and processed materials; exports of iron ore and bauxite, though they are growing fast, are still relatively unimportant sources of income. So, while the supplies of all sixteen materials in the industrial areas (valued at 1958 prices) rose about 25 per cent[1] from 1950-52 to 1955-57, the volume of exports of primary producing countries (also valued at 1958 prices) rose only about half as fast—14 per cent.

There was a further factor which reduced primary producing countries' earnings in this period: the trend of prices turned against them. The prices of the sixteen materials fell, on average, by about 10 per cent; the prices of the materials which the industrial areas supply themselves rose, mainly because of the rise in steel prices. Table 28, in current prices, adds together both the effect of the physical loss of share and the effect of the divergent price movements; the export earnings of the primary producing countries rose only 1 per cent, while the value of all materials supplied in the industrial areas rose 38 per cent. Thus, although the industrial expansion generated a considerable increase in the incomes of the producers of industrial materials, virtually none of this increase accrued to the primary producing countries.

In general, primary producers did not lose export earnings because they failed to hold their share of the market in the materials which they do supply; they lost because the pattern of demand and the trend of prices turned against them. Table 28 compares the exports of the principal primary producing countries, as shown in their export statistics, with total supplies in the industrial areas, valued at current market prices; this is only a rough comparison because of differences in valuation and because not all exporting countries are included; but it should show up any major change in the primary producers' share from 1950-52 to 1955-57. In total, there does not appear to have been any major change: the primary producers continued to supply about half the traditional materials available to the industrial areas. Experience varied from material to material; the next two sections examine the flows of trade in more detail. For each material they consider, first, whether the industrial countries increased or reduced their general dependence on imports, and secondly whether they changed the general pattern of their import supplies: in particular, whether they continued to import the same proportion from primary producing countries.

[1] Supplies are the total of home production and net imports, and so include fluctuations in stocks; the figure is therefore slightly different from that for the rise in consumption in table 12. The figure for supplies is used here because it is more nearly comparable with the figure for primary producing countries' exports.

Non-ferrous metals

Over this period, the share of imports in supplies of non-ferrous metals to the industrial countries rose a little (table 27; tin is not included in the table,

Table 27. Proportion of net imports in copper, lead and zinc supplies

Imports as per cent of total supplies

	U.S.A.		U.K.		E.E.C.		Total[a]	
	1950-52	1955-57	1950-52	1955-57	1950-52	1955-57	1950-52	1955-57
Copper	23	13	82	79	68	79	34	35
Lead	34	37	45	47	49	64	30	38
Zinc	31	47	76	73	46	56	28	37
Total[b]	**27**	**26**	**72**	**71**	**58**	**71**	**33**	**35**

(a) Including Canada and Japan. (b) Valued at 1958 prices.

Table 28. Supplies in the industrial areas and exports from the primary producing countries

$ mn, current

	Supplies, industrial areas[a]			Exports, main primary producers[b]			Primary exports as per cent of industrial supplies		Changes in average prices, 1950-52 to 1955-57
	1950-52	*1955-57*	*Change (per cent)*	*1950-52*	*1955-57*	*Change[c] (per cent)*	*1950-52*	*1955-57*	*Per cent*
Agricultural									
Cotton	3,225	2,775	−14	914	787	−14	28	28	*−13*
Wool	2,860	2,340	−18	2,023	1,862	− 8	71	80	*−27*
Jute	180	163	− 9	182	155	−15	101	95	*−23*
Natural rubber	1,865	1,329	−29	1,226	1,043	−15	66	78	*−24*
Total	**8,130**	**6,607**	**−19**	**4,345**	**3,847**	**−11**	**53**	**58**	
Traditional non-ferrous									
Copper	1,192	2,225	+87	519	924	+78	43	41	*+54*
Lead	672	766	+14	157	200	+27	23	26	*− 3*
Zinc	794	698	−12	106	95	−10	13	14	*−22*
Tin	487	413	−15	356	295	−16	73	71	*−15*
Total	**3,145**	**4,102**	**+30**	**1,138**	**1,514**	**+33**	**36**	**37**	
Total agricultural and traditional non-ferrous metals	**11,275**	**10,709**	**− 5**	**5,483**	**5,361**	**− 2**	**49**	**50**	
Forest products									
Woodpulp	4,220	6,110	+45	—	—	—	—	—	*+10*
Softwood	4,056	4,595	+13	—	—	—	—	—	*+ 4*
Total	**8,276**	**10,705**	**+29**	—	—	—	—	—	
Steel (iron ore)	**13,992**	**23,501**	**+68**	**16**	**130**	**+712**	**0.1**	**0.6**	*+30*
Processed									
Aluminium	1,050	2,280	+117	19	71	+274	1.8	3.1	*+37*
Rayon	1,025	1,109	+ 7	—	—	—	—	—	*−16*
New synthetics	362	986	+172	—	—	—	—	—	*−19*
Synthetic rubber	384	554	+44	—	—	—	—	—	*+ 5*
Plastic materials	1,527	2,416	+58	—	—	—	—	—	*−19*
Total	**4,348**	**7,345**	**+69**	**19**	**71**	**+274**	**0.4**	**1.0**	
Grand total	**37,891**	**52,260**	**+38**	**5,518**	**5,562**	**+ 1**	**14.6**	**10.6**	

Source : *See Appendix to article.*

(a) Domestic production *plus* net imports, valued at U.S. current prices.
(b) Since nearly all primary producers' exports of these commodities go to the industrial areas, the figures, except for cotton, are for the value of exports of each commodity to all areas. There is appreciable intra-trade between primary producers in cotton, and this has been excluded.
(c) The percentage *volume* changes of the main primary producers' exports are given in the small table on the right (valuing the commodities at United States 1958 prices) :

Agricultural		*Traditional non-ferrous metals*	
Cotton	−1	Copper	+17
Wool	+26	Lead	+32
Jute	+11	Zinc	+16
Natural rubber	+15	Tin	−3
Total	+15	Total	+13
Total, agricultural and traditional non-ferrous metals			+14

Table 29. Non-ferrous metal exports to the industrial areas[a]

Per cent of total exports

	Copper		Lead		Zinc		Tin		Total[b]	
	1950–52	*1955–57*	*1950–52*	*1955–57*	*1950–52*	*1955–57*	*1950–52*	*1955–57*	*1950–52*	*1955–57*
United States										
Main supply area	73	61	51	41	49	49	19	9	49	41
Other areas	27	39	49	59	51	51	81	91	51	59
	100	100	100	100	100	100	100	100	100	100
United Kingdom										
Main supply area	57	52	65	51	36	39	57	42	55	49
Other areas	43	48	35	49	64	61	43	58	45	51
	100	100	100	100	100	100	100	100	100	100
E.E.C.										
Main supply area	41	31	30	34	31	23	54	60	43	37
Other areas	59	69	70	66	69	77	46	40	57	63
	100	100	100	100	100	100	100	100	100	100
Total[c]										
Latin America	33	28	36	29	30	33	16	13	28	26
Sterling area	26	21	26	33	12	13	33	39	27	25
Other areas	41	51	38	38	58	54	51	48	35	49
	100	100	100	100	100	100	100	100	100	100

(a) Main supply areas are Latin America for the United States, the Sterling area for the United Kingdom, and the European related areas and Indonesia for the EEC countries.
(b) Aggregated at 1958 prices.
(c) Including Canada and Japan.

since all supplies are imported). The United Kingdom has, of course, virtually no home production: the small variations in the imports shown are accounted for by variations in supplies from scrap. The United States roughly halved its dependence on imports of copper; but it increased its dependence on imports of zinc and, to a lesser extent, of lead. The EEC countries increased their import dependence substantially for all three metals; neither domestic mine production (of zinc and lead) nor production from scrap kept pace with the rise in demand. In total, for all three metals, imports supplied about 33 per cent in 1950-52 and 35 per cent in 1955-57.

There was a significant trend in this period towards greater multilateralism in the trade in non-ferrous metals (table 29); there was some breaking down of the close associations between the principal importers—the United States, the United Kingdom and the EEC countries—and the areas with which they have general political or economic connections—Latin America, the sterling area, and the European dependencies respectively. Taking each area's imports of each metal, in about three instances out of four the importing countries were drawing half or more of their supplies from their main supply areas in 1950-52; by 1955-57 they were drawing their supplies from a wider range of countries, and their main supply areas provided a smaller proportion of their needs.

In general, in this period, trade in ores increased more than trade in metals (table 30); the big changes were in the United States. With copper—where the main distinction is between refined and unrefined

Table 30. Industrial areas' imports of copper, lead and zinc ores: and metal

Per cent of total imports

	Copper		Lead		Zinc	
	Unrefined	*Refined*	*Ores*	*Metal*	*Ores*	*Metal*
U.S.A.						
1950-52	37	63	17	83	75	25
1955-57	60	40	40	60	68	32
U.K.						
1950-52	39	61	—	100	37	63
1955-57	27	73	—	100	40	60
E.E.C.						
1950-52	..	..	62	38	85	15
1955-57	..	..	59	41	80	20
Total, all industrial areas						
1950-52	38[a]	62[a]	27	73	70	30
1955-57	43[a]	57[a]	41	59	69	31

(a) United States and United Kingdom only.

metal—unrefined metal raised its share of total United States copper imports from 37 per cent in 1950-52 to 60 per cent in 1955-57. (One reason for this change is that the grade of ore mined in Chile became unsuitable for the local refineries, and was consequently exported as ore rather than metal.) The proportion of ore in United States lead imports also rose substantially—from 17 per cent to 40 per cent. The share of ore in United States zinc imports fell.

In the EEC and the United Kingdom, the trend was, on the whole, opposite to that in the United States. With the construction of a new refinery in Rhodesia, the proportion of refined metal in British copper imports rose; in EEC countries, metal formed a larger share of imports of both lead and zinc. But the changes in Europe were small compared with those in the United States.

Agricultural materials

Of the four agricultural materials considered in this article, two—natural rubber and jute—are not produced at all in the industrial areas; cotton is grown only in the United States, which is a net exporter. So the only materials for which there could be any general change in import dependence is wool; table 31 gives the figures. The United States—whose demand for wool was falling during this period—reduced her import dependence, although it is still much greater than before the war; EEC countries, whose demand was rising fast, increased the share of imports in supplies. On balance, for all industrial areas, there was no change.

Table 31. Proportion of wool supplies represented by imports

	1950-52	1955-57	Change in imports
	per cent	*per cent*	*mn. lbs.*
U.S.A. ..	76	63	−166
Canada ..	82	78	− 5
U.K. ..	84	84	+ 64
E.E.C. ..	89	93	+184
Japan ..	97	96	+ 80
Total.. ..	83	84	+157

Source: *See Appendix to article.*

There were some changes in the sources of supply of these materials, in particular in the sources from which the industrial areas obtained their copper and rubber. With dollar liberalisation, and with the Suez crisis distorting the pattern of trade in 1955-57, the United Kingdom switched to American cotton over this period, mainly at the expense of Egypt and Pakistan. EEC countries also reduced the share of their imports coming from Pakistan and Egypt, and from Turkey; they substituted imports from Latin America; Peru, Mexico and Nicaragua supplied one-seventh of EEC countries' cotton in 1955-57. Latin America also obtained a substantial part of the Japanese market; Mexico in particular more than doubled her share of Japanese imports. Pakistan was the main loser in Japan. In total, there was a shift of trade away from Pakistan, Egypt and Turkey to Latin America and the United States (table 32).

The changes in the sources of rubber imports are more apparent than real; Indonesia, in this period, shipped more of her rubber direct, and less through Singapore. This probably explains most of the rise in Indonesia's share in the United States and United Kingdom markets; EEC countries and Japan, however, drew less of their rubber from Indonesia and more from Malaya.

The pattern of wool imports did not change much. The United States—which was a contracting market for wool in this period—took proportionately more from Argentina and New Zealand, and proportionately less from Australia and Uruguay; there was some movement towards New Zealand wool in the United Kingdom as well. But the share of the main producers in the total market hardly altered.

For agricultural materials as a whole, therefore, primary producers' share in the industrial areas' market has altered little. Some share of the trade in cotton was lost to the United States; but the main change here was the transfer of trade from one group of primary producers (Egypt, Turkey, and Pakistan) to another (Latin America).

Textile industries in primary producing countries

The comparative stagnation in primary producers' exports of textile fibres should not be put entirely on the debit side, in considering their balance of payments prospects. Part of the reason for the slow rise in textile output in the industrial areas—and hence for the slow rise in their demand for textile fibres—is that the world textile industry has been shifting towards primary producing countries; these countries raised the output of their textile industries considerably in this period, and consequently reduced their imports of finished textiles from industrial areas. To some extent, therefore, the primary producers are exporting fewer raw materials because they are making more of the finished goods themselves.

Table 33 shows the movement of the industry to

Table 32. Agricultural materials: shares of main suppliers in total exports to four main industrial areas

Per cent of total exports

	U.S.A.[a]		U.K.		E.E.C.		Japan		Total	
	1950–52	*1955–57*	*1950–52*	*1955–57*	*1950–52*	*1955–57*	*1950–52*	*1955–57*	*1950–52*	*1955–57*
COTTON										
Latin America			18	17	10	18	9	24	10	17
India			1	2	1	1	6	8	2	4
Pakistan			6	2	7	4	23	10	10	6
Egypt			13	2	14	6	4	4	11	5
Sudan			16	15	1	3	—	—	4	4
Syria			3	2	3	5	—	1	2	3
Turkey			1	2	8	4	—	—	4	2
United States			30	54	48	47	56	51	45	50
Others			12	4	8	12	2	2	12	9
Total			100	100	100	100	100	100	100	100
WOOL										
Australia	33	26	57	51	57	55	83	82	52	54
New Zealand	15	18	28	31	15	16	5	3	19	19
South Africa	6	10	10	9	15	14	5	5	11	11
Argentina	28	38	3	6	9	10	5	9	11	11
Uruguay	18	8	2	3	4	5	3	1	7	4
Total	100	100	100	100	100	100	100	100	100	100
RUBBER										
Malaya	45	32	84	64	55	59	63	74	58	52
Ceylon	5	2	8	4	7	4	—	1	6	3
Indonesia	30	36	7	32	28	25	37	25	24	30
Thailand	17	24	—	—	—	1	—	—	8	9
Indo-China	3	7	1	—	10	11	—	—	4	6
Total	100	100	100	100	100	100	100	100	100	100

Source: *See Appendix to article.*

(a) Figures are not given for cotton, since the United States is a net exporter.

primary producing areas. Pakistan, for instance, whose exports of cotton fell considerably in this period, more than trebled her own consumption; Turkey—another country whose exports were falling—nearly doubled hers. In total, the primary producers, who in 1950-52 were using only about 30 per cent as much cotton as the industrial areas, were using 43 per cent as much by 1955-57.

Judging from consumption figures, there was also some further shift in jute processing from the industrial to the primary producing countries during this period; but already by 1950-52 primary producing countries processed more than twice as much jute as the industrial areas, and trade in raw jute had become comparatively unimportant.

The wool industry, on the other hand, shows no such movement; the principal wool producing countries which also consume some proportion of their own clip (Australia, Argentina and Uruguay), used 9 per cent as much as the industrial areas in 1950-52, and 10 per cent as much in 1955-57. Greater development of local wool industries has probably been delayed by the high degree of industrial skill required, although Uruguay's 95 per cent rise in wool consumption over the period is largely accounted for by the growth in output of tops for export.

Table 33. Consumption of agricultural raw materials by some major primary producing countries[a]

	Cotton			Wool			Jute		
	1950-52	1955-57	Increase	1950-52	1955-57	Increase	1950-52	1955-57	Increase
	('000 bales)		per cent	(mn. lbs. clean)		per cent	('000 long tons)		per cent
India	3,515	4,390	+25	..	..	..	1,043	1,175	+13
Pakistan	187	867	+364	..	..	..	8	202	+2,510
Egypt	302	421	+40	..	..	..	..	..	..
Turkey	263	488	+86	..	..	..	..	..	..
Brazil	822	1,043	+27	..	..	..	..	..	..
Mexico	327	458	+40	..	..	..	..	..	..
Argentina	..	..	..	70	69	— 1	..	..	..
Uruguay	..	..	..	19	37	+95	..	..	..
Australia	..	..	..	53	63	+19	..	..	..
TOTAL	5,416	7,667	+41	142	169	+19	1,051	1,377	+31
as per cent of industrial areas consumption	*32*	*43*		*9*	*10*		*224*	*247*	

Source: *See Appendix to article.*
(a) The cotton consuming countries have been limited to those with a consumption of over 400,000 bales in 1957-58.

Scandinavia: forest products and iron ore

The Scandinavian countries are in a rather different position from that of other primary producers: they are less dependent on exports of primary products, and also less dependent on imports of manufactured goods. Further, the demand for the raw materials in which they are mainly interested—forest products and iron ore—rose appreciably faster than the demand for agricultural materials or for the traditional non-ferrous metals. As a consequence, whereas the other primary producers hardly raised their export earnings from industrial materials at all, the Scandinavian countries raised their total earnings from iron ore and forest products by 9 per cent (table 34).

Table 34. Woodpulp, softwood and iron ore: supplies in the industrial areas and exports from Scandinavia[a]

		Supplies, industrial areas			Scandinavian exports			Scandinavian exports as per cent of industrial supplies	
		1950-52	1955-57	Change (per cent)	1950-52	1955-57	Change (per cent)	1950-52	1955-57
In volume									
Woodpulp ..	'000 met. tons	28,570	37,461	+31	2,821	3,515	+25	9.9	9.4
Softwood ..	'000 standards	25,280	27,480	+ 9	948	1,359	+43	3.7	4.9
Total ..	$ mn. 1958 prices	8,680	10,540	+21	624	804	+29	7.2	7.7
Iron ore ..	mn. met. tons, iron content	94	127	+35	9	60	+11	9.6	7.9
In value									
Woodpulp ..	$ mn. current prices				582	554	— 5		
Softwood ..	$ mn. current prices				440	504	+15		
Total ..	$ mn. current prices				1,022	1,058	+ 4		
Iron ore ..	$ mn. current prices				121	186	+54		
Grand total ..	$ mn. current prices				1,143	1,244	+ 9		

Source: *See Appendix to article.*
(a) Norway, Sweden and Finland.

Scandinavia's share in the industrial area's market fell a little for woodpulp and iron ore, but rose for softwood. The pattern of demand for softwood moved in Scandinavia's favour, since it was European demand which rose, while United States demand fell. For woodpulp, the opposite was true; United States demand rose much faster than European (see table 12), and Scandinavia is only a marginal supplier of the American market; her share in it fell from 2.6 per cent in 1950-52 to 1.4 per cent in 1955-57.

Scandinavia's export prices fell strongly for both woodpulp and softwood during this period. Her export price for iron ore, on the other hand, rose; and although, in volume, her iron ore exports rose more slowly than the total demand for iron ore in the industrial areas, in value the rise accounted for two-thirds of the total rise of 9 per cent in export earnings from all three materials.

SUMMARY AND PROSPECTS

Summary

The main conclusions from this examination of trends in the industrial countries' demand for sixteen major industrial materials are these:

1. In this period (1950-52 to 1955-57) EEC countries and Japan accounted for all the rise in consumption of the agricultural materials, four-fifths of the rise for the traditional non-ferrous metals and over half the rise for all sixteen materials put together.
2. In each of the industrial areas the output of textiles either rose more slowly than that of metal goods, or fell; the consumption of metals rose 31 per cent, and that of textile fibres 22 per cent.
3. The substitution of processed materials for traditional ones has gone furthest in the United States and Japan; (Japan's high proportion of processed materials is explained by the rapid rise in the use of rayon in her textile industry). In the United States in particular, aluminium partly replaced the traditional non-ferrous metals, but not all its gains were from substitution; the boom in the aircraft industry also helped. In textiles, it was the new synthetics which gained everywhere; rayon improved its position appreciably only in Japan. Synthetic rubber, during this period, established itself both in the United Kingdom and in the EEC countries. Plastic materials' consumption, in weight and in absolute terms, rose by more than the four traditional metals together, and, in value, by more than these four metals and aluminium as well.
4. Because of this trend to substitution, the consumption of processed materials—which are produced almost entirely within the industrial areas themselves—rose much faster than the consumption of any of the other groups. Primary producing countries (excluding Scandinavia) export mainly agricultural materials and traditional non-ferrous metals, and demand for these rose comparatively little. Further, whereas prices rose, on balance, for the materials which the industrial countries supply themselves, they fell for the materials which the primary producers supply. The result was that the total value of the supplies of all sixteen materials in the industrial countries rose 38 per cent over this period; the exports of these materials from primary producing countries rose only 1 per cent.
5. The primary producing countries held their share of the market in the traditional materials; there does not appear to have been any general tendency for the industrial countries themselves to produce proportionately more of them. In non-ferrous metals, the main industrial areas appear, at the end of the period, to have been less closely tied to one particular supply area than they were at the beginning. There was also a tendency during the period to trade in ores rather than metals. In agricultural materials, the main change in sources of supply was for cotton, where Pakistan and Egypt became less important as sources of supply and Latin America became more important. During this period the primary producing countries increased their own production of cotton cloth considerably. To some extent, therefore, they were exporting less cotton because they were making more of the processed goods themselves.
6. The Scandinavian countries did rather better than other primary producers, in spite of falling prices for woodpulp and softwood, because the demand for forest products and for iron ore rose relatively fast.

Prospect

How far are the 1950-57 trends likely to continue? Any answers to this question are necessarily surmises; experience since the time of the Korean war, when long-term shortages were widely predicted, shows how dangerous it is to assume that past trends will necessarily continue. But both industries and Governments, in planning ahead, have to make some assumptions about the future; it is therefore sensible to make the best guesses one can, knowing them to be guesses.

The 1950-52 to 1955-57 period certainly had some exceptional characteristics. The fall in primary product prices from their Korean peak is an example. But, as the analysis shows, this fall in prices only partly explained the primary producers' loss of share in the input of materials into the industrial areas; using volume figures, primary producing countries' exports still lost ground.

It is very possible that the Korean price boom stimulated the development of substitute materials; but it is not easy to believe that this accounts for all the substitution of processed for traditional materials. The rapid rise in the use of aluminium can be explained partly by the rearmament programme after Korea; and the change from planes to missiles in the future may possibly reduce the rate at which the demand for aluminium rises. But this, again, accounts for only a small part of the process of substitution.

In general, although the prices of traditional materials are now more competitive than they were in the period 1950-57, it seems reasonable to expect the process of substitution to continue, though perhaps more slowly. In particular, the traditional materials may lose more ground in Europe, since the European tendency is to follow American patterns of production, and substitution has gone appreciably further in the United States.

It is much less certain that, in the decade ahead, the economies of western Europe and Japan will continue to grow very much faster than the United States economy; the period 1950-57 was exceptional for Europe and Japan, in that they were still recovering from the war. This is an important question for primary producers: for, as a general rule, a given percentage increase in industrial production in the industrial areas outside the United States will generate a bigger demand for primary producers' exports of industrial materials than the same percentage increase in United States production. It is true that a one per cent addition to United States industrial production is still nearly twice as large as a one per cent addition to production in the EEC countries, Japan, and the United Kingdom; but on the other hand the share of primary producers' exports in the input of industrial materials is three to four times larger in the EEC countries, Japan, and the United Kingdom than it is in the United States. If therefore, economic expansion slows down in Europe and Japan but quickens in the United States, and the rate of growth of all industrial areas together remains about the same as in 1950-57, then the primary producing countries will stand to lose.

These tentative conclusions cover, of course, only one part of the picture of the primary producing countries' possible future experience. They are for industrial materials only, and they refer to the demand side only; they do not cover the demand for food, or the possible trends on the supply side. But, as far as they go, they are not out of line with the more general conclusions of the United Nations *World Economic Survey* which are set out in the introduction to this article: that primary producing countries' exports may well rise more slowly than real income in the industrial areas, and that this may add appreciably to the difficulties of developing the under-developed areas of the world.

APPENDIX: SOURCES AND METHODS

General

The basic figures for the trends in demand in the industrial areas are summarized in table 35 at the end of this Appendix. For each area and for each material, estimates of production, imports, exports and consumption have been derived from the sources described below. In constructing these balance sheets, a residual difference generally arises which includes not only recorded changes in stocks but also unrecorded changes and any statistical discrepancies. Nearly all the figures of consumption are direct estimates either of actual consumption by first processors or of deliveries to such processors. The exceptions are plastic materials and steel (although for steel there are direct estimates of consumption in the United Kingdom). For these two materials, consumption is production plus imports less exports and no allowance can be made for changes in stocks.

Even when direct figures of consumption by first processors are available, the relation between the consumption of materials and the output of final products may be to some extent affected by changes in stocks and work in progress at various stages of manufacturing. The use of three-year averages should help to remove these effects, though it may not remove them all.

Metals

Principal sources: *Metallgesellschaft Aktiengesellschaft 1948-57*; *Overseas Geological Surveys 1954 and 1958*; International Tin Council; British Iron and Steel Federation.

In estimating non-ferrous metal supplies, the general principle applied has been to measure at the first stage of production or at the point of import or export. 'Production' therefore refers to metal originating within the industrial areas, whether from the mine or from scrap, and not to smelter or refinery production. Trade in ores has been estimated in metal content, where available. Where it is not, as in the trade figures for lead and zinc imports of the United Kingdom, the EEC countries and Japan, approximate conversion ratios of 75 per cent for lead and 50 per cent for zinc (supplied by the Imperial Smelting Corporation) have been applied. In dealing with bauxite, alumina and aluminium the conventional conversion ratios of 4 : 2 : 1 respectively have been applied, except in the case of Jamaican material, where the conventional ratio is 6 : 2 : 1. Consumption figures, as recorded by the *Metallgesellschaft*, cover new metal and metal recovered from scrap.

For iron ores, the conversion ratio used for iron content is 60 per cent of the gross weight. Figures for trade in steel

products have been converted, where necessary, into crude steel equivalent by adding 25 per cent.

Textile fibres

Principal sources: *Cotton—World Statistics*, International Cotton Advisory Committee, especially April 1958 and April 1959; *Industrial Fibres 1959*, Commonwealth Economic Committee; *Textile Organon*, especially the issue for January 1959.

For cotton and wool, production figures are for the season from 1 August to 31 July; production figures for the seasons 1950-51 to 1952-53 and 1955-56 to 1957-58 have been used in combination with consumption and trade figures for the calendar years 1950-52 to 1955-57. The cotton figures have been converted from bales, as stated by ICAC, into million lbs. at 478 lbs. per bale.

The figures for cotton consumption in the United States are not the figures of mill consumption normally used. Instead estimates of final consumption of cotton in various uses, as published by Textile Organon, have been used ('Textile Fibre End-use Survey', *Textile Organon*, January 1959). A small addition has been made to the end-use figures, of which the coverage is not quite complete, so as to reconcile them with a nine-year average of the statistics of mill consumption.

The wool figures have all been converted into clean equivalents at annual conversion ratios supplied by the CEC. The rayon and synthetic fibre consumption figures are the estimates given in ICAC, April 1958, the difference between them and the apparent consumption figures normally used being included in the residual item.

Rubber and plastics

Principal sources: International Rubber Study Group; *Industrial Statistics 1900-57*, OEEC, 1958; *Chemical Statistics Handbook, 1955*, Manufacturing Chemists' Association, Washington, D.C.; *Japanese Economic Statistics*, Economic Planning Agency, Tokyo; Imperial Chemical Industries Ltd.; national trade statistics.

The definition of synthetic rubber is that adopted by the International Rubber Study Group. Canadian figures for plastics are not available. Estimates of production of plastic materials have been supplied by Imperial Chemical Industries, and estimates of trade have been derived from United States, United Kingdom, and OEEC trade statistics.

Forest products

Principal sources: *Forest Products 1946-55, 1958*, and other issues, Food and Agriculture Organisation; *Timber Statistics*, Food and Agriculture Organisation; *General Statistics* and *Industrial Statistics 1900-57*, OEEC.

Woodpulp consumption figures are taken from OEEC General Statistics, except Japanese figures, which show apparent consumption. There was a change in the basis of United Kingdom stock-taking between the two periods owing to the decontrol of timber imports.

Prices

The series used are usually United States terminal market prices, because at the beginning of the period United Kingdom prices were affected by official controls. The same series are used for valuation at 1958 prices. For wool, rayon and new synthetic fibres, prices for valuation purposes in each area have been weighted according to the qualities imported, or the different varieties produced, in 1957.

The prices are :

Cotton:	USA 15/16″ middling New York-spot
Wool:	Merino 64s and cross-bred 50s, equivalent clean c.i.f. U.K. of Commonwealth auction prices
Jute:	Pakistan Mill Firsts (c.i.f. Dundee)
Rubber:	Wholesale, smoked sheets (New York)
Copper:	Bars, electrolytic (N.Y.)
Lead:	Pig, desilverised (N.Y.)
Zinc:	Prime Western (St. Louis)
Tin:	Pig, Straits (N.Y.) prompt
Aluminium:	Primary ingot, 99 per cent
Steel:	Composite, finished steel
Woodpulp:	Bleached sulphite (*Woodpulp Statistics*, August 1958, U.S. Pulp Producers' Association)
Softwood:	Douglas Fir No. 1 common 2″ × 4″ random length
Rayon:	Staple 1-5 denier
New synthetics:	Staple, Nylon 3 denier, Dacron 3-6 denier, Orlon 3-6 denier, Acrilan 3-5 denier
Synthetic rubber:	GR-S-1
Plastic materials:	U.S. and U.K. average export prices, 1958

Manufacturing production

Sources: *General Statistics*, OEEC; *United Nations Statistical Year-book 1958*; *Japanese Economics Statistics*, Economic Planning Agency, Tokyo.

The purpose of the adjustment to the indices for manufacturing production is to provide indices of the output of manufactured goods which are more closely comparable with the input of the sixteen major materials than the unadjusted series of total manufacturing output.

For the United Kingdom, United States, and EEC countries, the OEEC manufacturing production indices have been adjusted to exclude food and tobacco, basic metals and chemicals. The Japanese manufacturing index has been adjusted to exclude food and tobacco, printing, (except pulp and paper), chemicals, ceramics and primary metals.

Primary producing countries' trade in industrial materials

Principal sources: *Commonwealth and Sterling Area Statistical Abstracts 73, 77 and 78*; *International Financial Statistics May 1959*; national trade statistics.

Table 35. Industrial materials balance sheets : main industrial areas

Annual averages

	1955–57						Change from 1950–52 to 1955–57					
	U.S.A.	Canada	U.K.	E.E.C.	Japan	Total	U.S.A.	Canada	U.K.	E.E.C.	Japan	Total
COPPER												
(000 *met. tons, copper content*)												
Domestic mine production	960	314	—	2	76	1352	+124	+74	—	−1	+31	+228
Production from scrap	224	—	102	147	33	506	+54	..	+26	+24	−15	+89(*a*)
Total production	**1184**	**314**	**102**	**149**	**109**	**1858**	**+178**	**+74**	**+26**	**+23**	**+16**	**+317**
Imports	418	2	432	725	24	1601	−15	−3	+74	+306	+24	+386
of which unrefined	*250*	..	*117*	..	..	..	*+90*	..	*−21*	..	..	..
refined	*168*	..	*315*	..	..	..	*−105*	..	*+95*	..	..	..
Total supplies	**1602**	**316**	**534**	**874**	**133**	**3459**	**+163**	**+71**	**+100**	**+329**	**+40**	**+703**
Exports	244	159	42	175	6	626	+107	+53	+31	+16	−11	+196
of which unrefined	*11*	—	—	..	..	..	*+11*	*−8*	*−11*	..	..	..
refined	*232*	*159*	*42*	..	..	..	*+95*	*+62*	*+42*	..	..	..
Available : home use	**1358**	**157**	**492**	**699**	**127**	**2833**	**+56**	**+18**	**+69**	**+313**	**+51**	**+507**
Stock change (residual)	+36	+35	−17	−77	−13	−37	+41	+8	−24	+8	−4	+29
Consumption	**1322**	**122**	**509**	**776**	**140**	**2870**	**+15**	**+10**	**+93**	**+305**	**+55**	**+478**
LEAD												
(000 *met. tons, lead content*)												
Domestic mine production	308	173	8	129	31	649	−58	+24	+3	+27	+17	+13
Production from scrap	436	29	188(*b*)	53	56	762	−9	+1	+6	−1	+40	+37
Total production	**744**	**202**	**196**	**182**	**87**	**1411**	**−67**	**+25**	**+9**	**+26**	**+57**	**+50**
Imports	440	1	184	452	46	1123	+17	—	+17	+200	+43	+277
of which ores etc.	*175*	—	—	*267*	*25*	*467*	*+103*	—	—	*+115*	*+25*	*+243*
metal	*265*	*1*	*184*	*185*	*21*	*656*	*−86*	—	*+17*	*+85*	*+18*	*+34*
Total supplies	**1184**	**203**	**380**	**634**	**133**	**2534**	**−50**	**+25**	**+26**	**+226**	**+100**	**+327**
Exports	4	130	8	124	—	266	+2	−8	−7	+21	−6	+2
of which ores etc.	*1*	*52*	—	*9*	—	*62*	*+1*	*+33*	—	*+4*	—	*+38*
metal	*3*	*78*	*8*	*115*	—	*204*	*+1*	*−41*	*−7*	*+17*	*−6*	*−36*
Available : home use	**1180**	**73**	**372**	**510**	**133**	**2268**	**−52**	**+33**	**+33**	**+205**	**+106**	**+325**
Stock change (residual)	+63	−15	+7	+16	+11	+82	−15	+27	−6	+86	+26	+118
Consumption	**1117**	**88**	**365**	**494**	**122**	**2186**	**−37**	**+6**	**+39**	**+119**	**+80**	**+207**
ZINC												
(000 *met. tons, zinc content*)												
Domestic mine production	476	382	2	241	119	1220	−120	+71	+1	+24	+51	+27
Production from scrap	256	3	89	46	10	404	−32	+2	−4	+5	—	−29
Total production	**732**	**385**	**91**	**287**	**129**	**1624**	**−152**	**+73**	**−3**	**+29**	**+51**	**−2**
Imports	675	—	247	630	24	1576	+242	−1	−16	+198	+3	+426
of which ores etc.	*461*	—	*100*	*506*	*18*	*1085*	*+137*	—	*+4*	*+139*	*+2*	*+282*
metal	*214*	—	*147*	*124*	*6*	*491*	*+105*	*−1*	*−20*	*+59*	*+1*	*+144*
Total supplies	**1407**	**385**	**338**	**917**	**153**	**3200**	**+90**	**+72**	**−19**	**+227**	**+54**	**+424**
Exports	11	356	2	264	10	643	−23	+76	−3	+54	+9	+113
of which ores etc.	—	*175*	*1*	*66*	—	*242*	*−2*	*+34*	*−4*	*+9*	—	*+37*
metal	*11*	*181*	*1*	*198*	*10*	*401*	*−21*	*+42*	*+1*	*+45*	*+9*	*+76*
Available : home use	**1396**	**29**	**336**	**653**	**143**	**2557**	**+113**	**−4**	**−16**	**+173**	**+45**	**+311**
Stock change (residual)	+228	−22	+3	+55	+13	+277	+76	−4	−55	−5	−14	−2
Consumption	**1168**	**51**	**333**	**598**	**130**	**2280**	**+37**	—	**+39**	**+178**	**+59**	**+313**

(a) Excluding Canada. (b) Including production of English refined lead.

Table 35. (contd.) Industrial materials balance sheets : main industrial areas

Annual averages

	1955–57						Change from 1950–52 to 1955–57					
	U.S.A.	Canada	U.K.	E.E.C.	Japan	Total	U.S.A.	Canada	U.K.	E.E.C.	Japan	Total
JUTE												
(000 *long tons*)												
Domestic production	—	—	—	—	1	1	—	—	—	—	—	—
Retained imports	62	2	135	321	34	554	−14	−1	+24	+57	+16	+82
Available : home use	**62**	**2**	**135**	**321**	**35**	**555**	**−14**	**−1**	**+24**	**+57**	**+16**	**+82**
Stock change (residual)	..	..	−5	+3	..	..	..	..	−8	+3	..	..
Consumption	..	..	**140**	**318**	..	**557**	..	..	**+32**	**+54**	..	**+87**
TIN												
(000 *long tons, tin content*)												
Domestic mine production	—	—	1	—	1	2	—	—	—	—	+1	+1
Production from scrap	28	—	7	13	2	50	−2	—	—	+5	+1	+4
Total production	**28**	**—**	**8**	**13**	**3**	**52**	**−2**	**—**	**—**	**+5**	**+2**	**+5**
Imports	73	4	35	65	7	184	−19	−1	+3	+10	+6	−1
of which concentrates	*12*	—	*31*	*38*	—	*81*	*−15*	—	*+5*	*+6*	—	*−4*
metal	*61*	*4*	*4*	*27*	*7*	*103*	*−4*	*−1*	*−2*	*+4*	*+6*	*+3*
Total supplies	**101**	**4**	**43**	**78**	**10**	**236**	**−21**	**−1**	**+3**	**+15**	**+8**	**+4**
Exports	1	—	8	38	—	47	+1	—	−3	+7	—	+5
of which concentrates	—	—	—	—	—	—	—	—	—	—	—	—
metal	*1*	—	*8*	*38*	—	*47*	*+1*	—	*−3*	*+7*	—	*+5*
Available : home use	**100**	**4**	**35**	**40**	**10**	**189**	**−22**	**−1**	**+6**	**+8**	**+8**	**−1**
Stock change (residual)	+11	−1	+6	+6	−1	+21	−19	—	+7	—	+3	−9
Consumption	**89**	**5**	**29**	**34**	**11**	**168**	**−3**	**−1**	**−1**	**+8**	**+5**	**+8**
ALUMINIUM												
(000 *met. tons*)												
Domestic mine production	418	—	—	464	—	882	+7	—	—	+155	—	+162
Production from scrap	318	7	98	151	15	588	+64	—	+22	+55	+9	+150
Total production	**736**	**7**	**98**	**615**	**15**	**1470**	**+71**	**—**	**+22**	**+210**	**+9**	**+312**
Imports	1524	875	315	449	107	3270	+645	+367	+57	+228	+61	+1358
of which bauxite[a]	*1338*	*874*	*84*	*354*	*103*	*2753*	*+588*	*+366*	*+14*	*+167*	*+57*	*+1192*
metal	*186*	*1*	*231*	*95*	*4*	*517*	*+57*	*+1*	*+43*	*+61*	*+4*	*+166*
Total supplies	**2260**	**882**	**413**	**1064**	**122**	**4740**	**+716**	**+367**	**+79**	**+438**	**+70**	**+1670**
Exports	29	451	20	215	6	721	+13	+118	+11	+58	−6	+194
of which bauxite[a]	*8*	—	*13*	*191*	—	*212*	*−7*	—	*+7*	*+54*	—	*+54*
metal	*21*	*451*	*7*	*24*	*6*	*509*	*+20*	*+118*	*+4*	*+4*	*−6*	*+140*
Available : home use	**2231**	**431**	**393**	**849**	**116**	**4019**	**+703**	**+249**	**+68**	**+380**	**+76**	**+1476**
Stock change (residual)	+312	+345	+33	+284	+40	+1014	−73	+243	+12	+116	+34	+332
Consumption	**1919**	**86**	**360**	**565**	**76**	**3006**	**+776**	**+6**	**+56**	**+264**	**+42**	**+1144**
COTTON												
(*mn. lbs*)												
Domestic production	6164	—	—	22	—	6186	−224	—	—	+10	—	−214
Imports	66	180	753	2100	1234	4333	−6	−10	−63	+319	+329	+569
Total supplies	**6230**	**180**	**753**	**2122**	**1234**	**10519**	**−230**	**−10**	**−63**	**+329**	**+329**	**+355**
Exports	2475	—	—	—	—	2475	+456	—	—	—	—	+456
Available : home use	**3755**	**180**	**753**	**2122**	**1234**	**8044**	**−686**	**−10**	**−63**	**+329**	**+329**	**−101**
Stock change (residual)	−711	+3	0	+102	+20	−586	−786	+10	+96	+129	−85	−636
Consumption	**4466**	**177**	**753**	**2020**	**1214**	**8630**	**+100**	**−20**	**−159**	**+200**	**+414**	**+535**

(a) Aluminium equivalent.

Table 35. (contd.) Industrial materials balance sheets : main industrial areas

Annual averages

	1955–57						Change from 1950–52 to 1955–57					
	U.S.A.	Canada	U.K.	E.E.C.	Japan	Total	U.S.A.	Canada	U.K.	E.E.C.	Japan	Total
WOOL (*mn. lbs. clean equivalent*)												
Domestic production	133	5	71	43	6	258	+10	—	+9	−3	+4	+20
Imports	231	20	412	634	148	1445	−167	−5	+68	+207	+80	+183
Total supplies	**364**	**25**	**483**	**677**	**154**	**1703**	**−157**	**−5**	**+77**	**+204**	**+84**	**+203**
Exports	—	2	20	78	—	100	−1	—	+4	+23	—	+26
Available : home use	**364**	**23**	**463**	**599**	**154**	**1603**	**−156**	**−5**	**+73**	**+181**	**+84**	**+177**
Stock change (residual)	−52	+2	−14	−84	−8	−156	−87	+2	+27	+56	−10	−12
Consumption	**416**	**21**	**477**	**683**	**162**	**1759**	**−69**	**−7**	**+46**	**+125**	**+94**	**+189**
PLASTIC MATERIALS (000 *met. tons*)												
Domestic production	1836	100(*a*)	355	803	206	3300	+789	..	+175	+550	+160	+1674(*b*)
Imports	3	34(*c*)	29	144	21	231	+2	+6(*c*)	+15	+104	+20	+141(*b*)
Total supplies	**1839**	**134**	**384**	**947**	**227**	**3531**	**+791**	..	**+190**	**+654**	**+180**	**+1815**(*b*)
Exports	189	9(*c*)	110	195	8	511	+116	+5(*c*)	+58	+157	+6	+337(*b*)
Available : home use	**1650**	**125**	**274**	**752**	**219**	**3020**	**+675**	..	**+132**	**+497**	**+174**	**+1478**(*b*)
RUBBER (000 *long tons*)												
Domestic production (synthetic)	1056	119	—	11	—	1186	+349	+54	—	+9	—	+412
Production of reclaimed rubber	296	5	38	38	—	377	−21	—	+7	+14	—	—
Total production	**1352**	**124**	**38**	**49**	—	**1563**	**+328**	**+54**	**+7**	**+23**	—	**+412**
Imports	602	68	334	460	120	1584	−203	+15	+15	+160	+57	+44
of which natural	*594*	*44*	*291*	*373*	*111*	*1413*	*−191*	*+3*	*−23*	*+93*	*+49*	*−69*
synthetic	*8*	*12*	*42*	*87*	*9*	*158*	*−11*	*+10*	*+37*	*+67*	*+8*	*+111*
reclaimed	—	*12*	*1*	—	—	*13*	*−1*	*+2*	*+1*	—	—	*+2*
Total supplies	**1954**	**192**	**372**	**509**	**120**	**3147**	**+125**	**+69**	**+22**	**+183**	**+57**	**+456**
Exports	240	81	79	2	—	402	+205	+40	−2	+2	—	+245
of which natural	*11*	—	*71*	—	—	*82*	*+7*	—	*−5*	—	—	*+2*
synthetic	*216*	*81*	—	—	—	*297*	*+198*	*+40*	—	—	—	*+238*
reclaimed	*13*	—	*8*	*2*	—	*23*	—	—	*+3*	*+2*	—	*+5*
Available : home use	**1714**	**111**	**293**	**507**	**120**	**2745**	**−80**	**+29**	**+24**	**+181**	**+57**	**+211**
Stock change (residual)	−46	+7	+16	−17	+2	+38	−286	+8	−5	−14	+2	−295
Consumption	**1760**	**104**	**277**	**524**	**118**	**2783**	**+206**	**+21**	**+29**	**+195**	**+55**	**+506**
of which natural	*579*	*43*	*207*	*370*	*109*	*1308*	*+36*	*+2*	*−10*	*+95*	*+47*	*+170*
synthetic	*898*	*45*	*39*	*96*	*9*	*1087*	*+197*	*+18*	*+35*	*+75*	*+8*	*+333*
reclaimed	*283*	*16*	*31*	*58*	—	*388*	*−27*	*+1*	*+4*	*+25*	—	*+3*
RAYON (*mn. lbs.*)												
Domestic production	1183	76	430	1254	872	3815	−47	+18	+96	+346	+530	+943
Imports	118	14	3	73	2	210	+31	−8	−4	+12	+2	+33
Total supplies	**1301**	**90**	**433**	**1327**	**874**	**4025**	**−16**	**+10**	**+92**	**+358**	**+532**	**+976**
Exports	40	2	32	452	32	558	+14	+1	−14	+187	—	+188
Available : home use	**1261**	**88**	**401**	**875**	**842**	**3467**	**−30**	**+9**	**+106**	**+171**	**+532**	**+788**
Stock change (residual)	−5	−3	+34	+16	−8	+34	−15	−4	+41	+22	—	+44
Consumption	**1266**	**91**	**367**	**859**	**850**	**3433**	**−15**	**+13**	**+65**	**+149**	**+532**	**+744**

(a) Approximate estimate (b) Excluding Canada. (c) Estimate derived from OEEC, United States and United Kingdom trade statistics.

Table 35. (contd.) Industrial materials balance sheets : main industrial areas

Annual averages

	1955–57						Change from 1950–52 to 1955–57					
	U.S.A.	Canada	U.K.	E.E.C.	Japan	Total	U.S.A.	Canada	U.K.	E.E.C.	Japan	Total
NEW SYNTHETIC FIBRES (*mn. lbs.*)												
Domestic production	525.7	18.5	53.6	103.3	63.9	765.0	+357.8	+12.1	+40.1	+85.1	+58.6	+553.7
Imports	1.0	4.1	6.5	11.7	0.9	24.2	..	..	..	+10.8	..	..
Total supplies	**526.7**	**22.6**	**60.1**	**115.0**	**64.8**	**789.2**	..	..	..	**+95.9**	..	..
Exports	22.7	1.7	7.5	19.8	1.3	53.0	+17.3	..	..	+17.6	..	..
Available : home use	**504.0**	**20.9**	**52.6**	**95.2**	**63.5**	**736.2**	..	..	..	**+78.3**	..	..
Stock change (residual)	+12.6	−0.1	+3.4	−0.9	+2.4	+17.4	..	..	..	−2.2	..	..
Consumption	**491.4**	**21.0**	**49.2**	**96.1**	**61.1**	**718.8**	**+296.4**	**+13.8**	**+41.1**	**+80.5**	**+55.9**	**+487.7**
WOODPULP (*mn. met. tons*)												
Domestic production	19.56	9.33	0.11	2.63	2.18	33.82	+5.09	+1.24	−0.03	+0.73	+1.21	+8.24
Imports	2.01	0.06	2.23	1.96	0.14	6.40	−0.01	+0.02	+0.69	+0.61	+0.06	+1.38
Total supplies	**21.57**	**9.39**	**2.34**	**4.59**	**2.32**	**40.21**	**+5.08**	**+1.26**	**+0.66**	**+1.34**	**+1.27**	**+9.62**
Exports	0.54	2.12	—	0.09	—	2.75	+0.39	+0.31	—	+0.03	—	+0.72
Available : home use	**21.03**	**7.27**	**2.34**	**4.50**	**2.32**	**37.46**	**+4.70**	**+0.95**	**+0.66**	**+1.31**	**+1.27**	**+8.89**
Stock change (residual)	+0.47	+0.12	+0.11	+0.04	—	+0.75	−0.10	−0.17	+0.07	+0.06	—	−0.14
Consumption	**20.55**	**7.15**	**2.23**	**4.46**	**2.32**	**36.71**	**+4.79**	**+1.12**	**+0.59**	**+1.26**	**+1.27**	**+9.03**
SAWN SOFTWOOD (*mn. standards*)												
Domestic production	15.01	3.69	0.05	2.64	3.87	25.26	−0.36	+0.16	−0.01	+0.09	+1.32	+1.20
Imports	1.55	0.08	1.48	1.63	0.02	4.76	+0.25	+0.04	+0.34	+0.62	+0.02	+1.27
Total supplies	**16.56**	**3.77**	**1.53**	**4.27**	**3.89**	**30.02**	**−0.11**	**+0.20**	**+0.33**	**+0.71**	**+1.34**	**+2.47**
Exports	0.30	2.10	—	0.13	0.01	2.54	—	+0.30	—	−0.03	—	+0.27
Available : home use	**16.26**	**1.67**	**1.53**	**4.14**	**3.88**	**27.48**	**−0.11**	**−0.10**	**+0.33**	**+0.74**	**+1.34**	**+2.20**
Stock change(*a*)	+0.11	+0.04	+0.02	+0.02	−0.02	+0.17	+0.08	+0.02	−0.05	—	−0.02	+0.03
Consumption	**16.15**	**1.63**	**1.51**	**4.12**	**3.90**	**27.31**	**−0.19**	**−0.12**	**+0.38**	**+0.74**	**+1.36**	**+2.17**
STEEL (*mn. met. tons, crude steel equivalent*)												
Domestic production	104.3	4.5	21.4	56.4	11.0	197.6	+15.0	+1.3	+4.5	+19.3	+4.9	+45.0
Imports	1.1	2.2	1.6	9.2	0.6	14.7	−0.7	+0.7	+0.6	+5.9	+0.6	+7.1
Total supplies	**105.4**	**6.7**	**23.0**	**65.6**	**11.6**	**212.3**	**+14.3**	**+2.0**	**+5.1**	**+25.2**	**+5.5**	**+52.1**
Exports	5.8	0.6	3.6	21.1	1.6	32.7	+1.5	+0.2	+0.8	+6.9	+0.3	+9.7
Available : home use	**99.6**	**6.1**	**19.4**	**44.5**	**10.0**	**179.6**	**+12.8**	**+1.8**	**+4.3**	**+18.3**	**+5.2**	**+42.4**

Sources : See pages 44 to 45.

(a) There was a change in the basis of U.K. stock-taking during this period.

SEASONAL CORRECTIONS

Wherever possible, the monthly and quarterly statistics used in the *Economic Review* have been adjusted to eliminate seasonal variations. This note describes the methods of seasonal adjustment and discusses how far the adjusted series can help the interpretation of current developments. The last section of the note describes an analysis of imports which, although it did not yield a satisfactory set of seasonal corrections, may be of help to others.

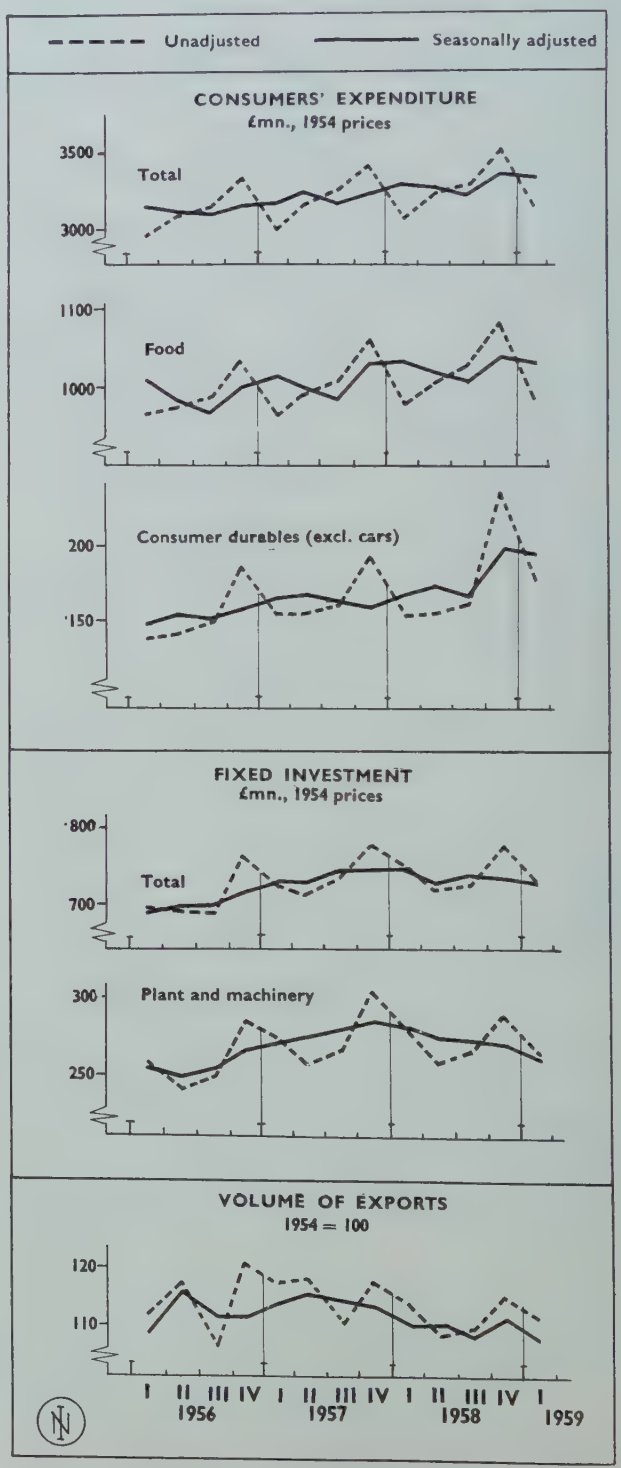
Procedures used

The object of seasonal correction is to remove from statistical series those variations that occur regularly, for such reasons as annual holidays, the weather, harvests and customary patterns of trade. The ideal course would probably be to calculate the influence of the seasonal forces, such as temperature and holidays, on the activities in question and to adjust the relevant statistical series by the actual temperature, number of days holiday and so on. This type of adjustment has been applied to allow for variations in the number of working days in different months and quarters. Generally, however, specific allowance for seasonal factors is not feasible. Conventional statistical procedures are therefore used. These entail an attempt to measure the average seasonal variation shown by each series in a recent period.

Seventy-one of the series shown in the Statistical Appendix have been seasonally corrected by the Institute. These series, with the percentage corrections applied to the quarterly data, are shown in full in table 40 on page 54; six of the main series are shown, both corrected and uncorrected, in chart 11. The corrections have been graded into three classes of reliability indicated by differences in type, as explained later. A number of additional seasonally corrected series have been taken from other sources and are listed below in table 36. The corrected series for consumers' expenditure on cars and motor cycles, published in earlier issues of the Review (Appendix table 6), has been withdrawn because, after further examination, it appeared to be too unreliable.

The methods used were as follows: (1) Where appropriate, preliminary adjustments were made to take account of the different number of working days in each month or quarter. (2) Estimates were made of the 'trend' of each series. For this purpose moving averages were generally used, but a straight line or exponential curve was fitted where the movement of the series suggested that it was a practical short cut. A moving average allows for gradual changes in the underlying course of the series, whereas

Chart 11. Six economic indicators, unadjusted and seasonally adjusted



Source: *Monthly Digest of Statistics, Appendix tables 1, 6, 7, and 11.*

Table 36. Seasonally corrected series taken from other sources

	Appendix table	Source
Industrial production:		
United Kingdom	2 and 16	*Monthly Digest of Statistics*[a].
United States	16	*Federal Reserve Bulletin*[b].
Canada	16	*Canadian Statistical Review.*
Continental OEEC, total and single countries	16	*General Statistics, OEEC*[c].
United Kingdom :		
Gross domestic product, output series	1	*London and Cambridge Economic Service.*
United States:		
Gross national product and components	17	*Survey of Current Business*[d] and *Economic Indicators.*
Durable goods: sales and new orders	17	*Survey of Current Business*[d].
Building and contracting orders	17	*Economic Indicators*[e].
Unemployment	17	*Survey of Current Business*[d].

(a) C.S.O. for total industrial production; the same methods have, so far as possible, been applied to the figures for the industry groups given in Appendix table 2 and to the series in Appendix table 16 which excludes building.
(b) Description of method in December, 1953 issue.
(c) Description of method in OEEC Statistical Bulletins, *Definition and Methods I, Indices of Industrial Production*, 3rd edition, 1957.
(d) Description of method in *Business Statistics*, 1957.
(e) Compiled by F. W. Dodge Corp., New York, seasonally adjusted by National Bureau of Economic Research, New York.

a straight line or exponential curve implies that the trend is constant. In many instances the difference in the results obtained by applying different methods is negligible. (3) Usually the estimated seasonal correction is the arithmetic mean of the deviations from ' trend '. Occasionally the median was used, or the mean was calculated after omitting large deviations easily attributable to known temporary influences, for example, the influence of dock strikes on exports. Table 37 shows what procedure was applied to each series.

Where seasonal adjustments have been made to sub-divisions of an aggregate, for example to fixed investment in various industry groups, the adjusted aggregate is the sum of the adjusted sub-divisions and is not separately calculated. In some series it has been found that certain components of an aggregate show an underlying pattern of seasonal variation while other components do not. For example, employment in certain industry groups is markedly seasonal, in others it is not. In such instances the correction applied to the aggregate is the sum of the corrections for the components which show seasonal variation.

Table 37. Summary of procedures used for seasonal adjustments

Series	Frequency of basic series	Trend	Deviations from trend	Adjustment derived from deviations
Employment	Monthly	Moving average	Absolute	Mean[a]
Unemployment	Monthly	Moving average	Absolute	Mean[a]
Unfilled vacancies	Monthly	Moving average	Absolute	Mean[a]
Income from employment	Quarterly	Straight line	Absolute	Mean
Disposable personal income	Quarterly	Straight line	Absolute	Mean
Consumers' expenditure	Quarterly	Exponential	Percentage	Mean
Fixed investment	Quarterly	Moving average	Percentage	Median
Exports of merchandise[b]	Quarterly, monthly	Moving average	Percentage	Mean[a]
Total exports of goods and services	Quarterly	Moving average	Percentage	Mean
Public authorities' current spending	Quarterly	Moving average	Percentage	Mean
Level of total stocks	Quarterly	Moving average	Percentage	Median

(a) After elimination of extreme deviations due to assignable causes such as the effect of dock strikes.
(b) First adjusted for the different number of working days in months or quarters.

Reliability of the series

In some series the seasonal pattern was found to be so pronounced and consistent that the corrected series could be adopted with every confidence. In others the pattern was found to be less steady and the problem more difficult.

There is no precise rule for determining whether a series of corrections is worth adopting or not. It was therefore necessary to judge the corrections in each instance. Where it was clear that pronounced seasonal forces were in fact at work, even if their effects appeared to vary in magnitude from year to year, corrections were applied. Where the data were very irregular, or there was reason to believe that seasonal influences tended to offset one another, no correction was made; this was true of total imports. In deciding whether to adopt a correction the size of the confidence limits (discussed below) in relation to the size of the corrections was also taken into account.

In many instances the seasonal pattern had to be estimated from data for only a very few years; and even when figures for many years were available, the pattern sometimes showed signs of changing so that only fairly recent years were used. A seasonal pattern based on a few observations is bound to be uncertain. All the adjustments are subject to revision and will be brought up to date as more data become available.

An attempt was made to assess the reliability of the corrections by using a measure of the variability of the original series about the corrected series. For each quarter, standard deviations were calculated. These were then used to derive confidence limits, taking into account the number of observations upon which the corrections were based.

The corrections have been graded into three classes, indicated by differences in type in table 40, according to the confidence limits:[1]

Bold type	up to $\pm\frac{1}{2}$ per cent.
Ordinary type	$\pm\frac{1}{2}$ to $\pm2\frac{1}{2}$ per cent.
Italics	more than $\pm2\frac{1}{2}$ per cent.

This grading indicates the reliability of the correction for any single quarter. A correction estimated at +5 per cent, if in the second grade, is almost certainly not accurate within $\frac{1}{2}$ per cent, but almost certainly lies within the range $+2\frac{1}{2}$ to $+7\frac{1}{2}$ per cent, and so on. To interpret quarter to quarter changes the reliability of the corrections to both quarters must be taken into account. There may however be pitfalls in this procedure, because of possible correlations between the variables. The possibility of calculating more directly the reliability of corrections to quarter to quarter changes in the series is under consideration.[2]

Seasonal corrections are necessarily derived from data that include all kinds of variations, short period and long period, regular and irregular. There is no perfect way of separating these from one another. The use of moving averages goes some way towards distinguishing those changes which persist for a year or more. The use of a median, rather than of the arithmetic mean of the variations, removes the effect of extreme short-period variations; when the mean has been used, specific allowances have sometimes been made for the most obvious temporary disturbances. Nevertheless these techniques are not perfect and they entail a tacit assumption that minor short-period variations have cancelled out. The confidence limits are partly a measure of how far this assumption can be wrong and partly a measure of how far the seasonal influences themselves can vary—for example, how far the severity of winters has varied.

It will be seen from table 40 that the confidence limits vary considerably. They are small for most of the employment and unemployment series; but for fixed investment they are large, partly because the period for which quarterly data are available is short. In the worst grade ($\pm2\frac{1}{2}$ per cent and over), they are generally in the range $\pm2\frac{1}{2}$ to 7 per cent; in no instance does the limit exceed ±10 per cent. For some series, the corrections are more reliable for some quarters of the year than for others.

The use of the series

The fact that some of the seasonal corrections are subject to wide confidence limits does not mean that the corrected series are of no value. Economic analysis of general trends is not a process in which conclusions are drawn from the movement of one or two statistical series examined in isolation. Unlike, say, the experimental scientist, the economic analyst or business man does not generally examine an isolated phenomenon, seeking, by repeated observation of it, to establish a law as to the typical behaviour of the

[1] The limits were calculated at the 90 per cent level of confidence from the t-distribution for the appropriate length of the observed series. Detailed tables showing the standard deviations and the confidence limits for each quarterly correction will be supplied on request.

[2] It should be noted that this procedure gives rise to difficulties too: if there were a measure of the reliability of corrections to the change in a series between, say, the first and second quarters of the year and a similar measure for the change between the second and third quarters, there would still be no direct measure of the reliability of the change in the corrected series between, say, the first and third quarters. Moreover comparison is most often made not between two single quarters but between the latest quarter and a series of earlier quarters.

observed body. Instead, like a meteorologist, he gathers all the information he can, whether statistical or qualitative, in order to assess how a balance of forces is shifting—a balance of forces which he views within a framework of prior experience and theoretical training. He has to form a view of the situation, however good or bad the information at his disposal. His interpretation of events inevitably involves guesswork. What he seeks is the best estimate he can get of each relevant quantity; and, in weighing up such evidence, he will take account of its reliability. In these circumstances, measures of statistical reliability cannot alone determine how much weight should be given to the movement of a particular series. The test of whether a seasonal correction is worth using is simply whether it will help rather than hinder interpretation. Corrections were adopted wherever a clearly discernible pattern of seasonal variation was found; hence it is believed that they help to expose more clearly what has been happening, but they are no substitute for interpretation. A movement in the corrected series may mean simply that the seasonal influence is stronger than usual, for example that the winter is exceptionally hard, or that there has been some other purely temporary disturbance; the seasonal correction only allows for the average variation revealed by past experience.

Seasonal movements in imports

Imports present a special problem because their geographical pattern varies as well as their commodity composition, and each source of supply of each commodity may be subject to a different seasonal influence. Strong seasonal influences are at work in many instances, but their timing and intensity varies considerably and the behaviour of total imports at any time reflects the net effect of them all.

Estimates made from quarterly movements in the total volume of imports over the years 1947 to 1957 are shown in table 38 below. Although the confidence limits are no wider than those for many of the series shown in table 40, they are large in relation to the quarterly deviations themselves. Moreover the confidence limits for the corrections to individual commodities and commodity groups are almost without exception very wide. For these reasons no seasonal correction has been made to the import figures shown in the Statistical Appendix.

The calculations were repeated using monthly data for the period 1953 to 1957. Comparison of the mean deviation with the confidence limits suggests that seasonal adjustments may be worth using for the months January, February (when the number of working days is presumably the main factor), March and September (table 39).

Table 38. Quarterly deviations in total volume of imports

Percentages

	Mean quarterly deviation[a]	Confidence limit(±)
1st quarter	+0.5	1.8
2nd quarter	+1.6	1.9
3rd quarter	*−0.0*	2.7
4th quarter	+1.5	1.3

(a) Percentage deviations from geometric moving average; if used as seasonal correctors, the sign should be reversed.

Table 39. Monthly deviations in total volume of imports[a]

Percentages

	Mean monthly deviation[b]	Confidence limit(±)
January	+4.4	1.9
February	*−7.0*	3.6
March	*+7.0*	5.0
April	+1.2	1.4
May	*+0.8*	4.7
June	*−1.5*	4.7
July	+0.9	2.0
August	*−2.6*	4.2
September	*−5.8*	2.1
October	*+1.4*	9.2
November	*+1.3*	2.6
December	*−1.0*	3.0

(a) For the significance of italics, see page 52.
(b) Percentage deviations from geometric moving average; if used as seasonal correctors, the sign should be reversed.

In addition, a preliminary attempt was made to discover whether regular seasonal patterns could be discerned in particular classes of imports. The quarterly movements in all 52 commodity divisions of imports in the Standard International Trade Classification were analysed. A number of major commodities within those divisions were also analysed, sometimes also according to the source of imports. The analysis by divisions was based on figures at constant 1954 prices; individual commodities were analysed in terms of physical quantities. The more satisfactory results are given in table 41, where the reliability of the correction is indicated by differences in type, as in table 40. The reliability is generally poor, but the correction factors may be of some value to those concerned with imports of particular commodities.

Table 40. Seasonal corrections calculated by the National Institute

	Appendix table	Percentage correction to unadjusted figures[a][b]				Commencing date of quarterly data
		I	II	III	IV	
Employment						
Total industrial production*	2	+ 0.1	+ 0.1	+ 0.1	− 0.3	1950
Building, contracting	2	+ 1.5	− 0.6	− 1.0	+ 0.1	1950
Mining, public utilities*	2	0	0	0	0	1950
Total manufacturing*	2	− 0.1	+ 0.3	+ 0.2	− 0.3	1950
Metals, metal-using*	2	− 0.4	+ 0.1	+ 0.5	− 0.3	1950
Textiles, leather, clothing*	2	− 0.5	+ 0.1	+ 0.5	− 0.1	1950
Other manufacturing*	2	+ 0.4	+ 0.4	− 0.3	− 0.6	1950
Total civil employees*	3	+ 0.3	0	− 0.3	− 0.1	1950
Agriculture, etc.	3	+ 4.3	− 1.0	− 5.0	+ 2.1	1950
Transport, communications	3	+ 0.5	− 0.1	− 0.7	+ 0.3	1950
Distribution	3	+ 0.4	+ 0.4	0	− 0.8	1950
Other services*	3	+ 0.4	− 0.1	− 0.6	+ 0.2	1950
Unemployment[c]						
Total	3	− 0.2	0.0	+ 0.2	0.0	1948
Metals, metal-using	3	0	0	0	0	1948
Textiles, leather, clothing	3	0	0	0	0	1948
Other manufacturing	3	0	0	0	0	1948
Building, contracting	3	− 0.8	+ 0.3	+ 0.5	0.0	1948
Mining, public utilities	3	0	0	0	0	1948
Transport, other services	3	− 0.2	+ 0.1	+ 0.2	− 0.1	1948
Unfilled vacancies						
Total	3	+ 0.1	− 0.1	− 0.1	+ 0.1	1949
Income from employment						
Total	5	− 1.3	+ 1.5	+ 0.5	− 0.8	1954
Disposable personal income						
Total*	6	+ 5	− 2	+ 1	− 4	1954
Consumers' expenditure (at 1954 prices)						
Total, value and volume*	6	+ 7	+ 1	− 2	− 5	1953
Food	6	+ 5	+ 1	− 2	− 4	1953
Alcoholic drink	6	+18	+ 5	− 4	−14	1951
Tobacco	6	+ 5	+ 1	− 5	− 1	1950
Housing	6	+ 2	− 3	0	+ 1	1950
Fuel, light	6	−18	+ *3*	+*25*	− *2*	1950
Clothing	6	+15	− 3	+ 6	−*14*	1953
Furniture, etc.	6	+*11*	+ *7*	− *1*	−*13*	1953
Radio, electric, etc.	6	+ *7*	+*14*	+ *6*	−*20*	1953
Other goods	6	+10	+ 4	− 3	− 9	1953
Services	6	+10	+ 1	−12	+ 3	1953

(a) For the significance of italics and bold type, see page 52.
(b) The adjustment factors do not always sum to zero, partly because of rounding, partly because of quarterly differences in the absolute levels of the series to which the corrections relate.
(c) Percentage of the labour force in the industry concerned.
* Series marked with an asterisk are aggregates. The adjustments are applied to the constituent series; hence the adjustments to the aggregates may vary as the relative importance of the constituent series varies. Those shown here are those which apply to the four quarters of 1957.

Table 40. (cont'd.) Seasonal corrections calculated by the National Institute

	Appendix table	Percentage correction to unadjusted figures[a][b]				Commencing date of quarterly data
		I	II	III	IV	
Fixed investment						
Total*	7	0	+ 2	+ 2	− 5	1954
Dwellings: public	7	+ *3*	− 2	+ 1	− 2	1955
private	7	+ 2	− 1	− *1*	0	1955
Total exc. dwellings*	7	**0**	+ 2	+ 3	− 5	1954
By type of asset						
Plant, machinery	7	− 1	+ 5	+ *4*	− 8	1954
Vehicles, etc.	7	*0*	− *3*	+ *5*	− *2*	1954
Buildings, works	7	+ 2	+ 3	+ 1	− *6*	1954
By industry group						
Fuel, power*	7	− 2	+ *7*	+ *3*	− *8*	1954
Public, social services	7	− *5*	+ *1*	+ *4*	*0*	1954
Transport, communications	7	− *2*	+ *3*	+ *3*	− *4*	1954
Manufacturing*	7	+ 3	+ 4	+ *2*	− 9	1955
Other industries, services	7	+ 2	+ *4*	+ *3*	− *9*	1954
By sector						
Public*	7	− 5	+ **6**	+ **3**	− *4*	1956
Private*	7	+ **2**	**0**	+ *3*	− *5*	1956
Exports						
Total value and volume*	11	− 1	− 2	+ 5	− *2*	1950
By commodity, volume:						
Food, beverages, tobacco	13	+ *1*	+ *4*	+ *5*	− *9*	1950
Basic materials, fuels	13	− 4	0	+ *6*	− 2	1950
Total manufactures*	13	− *1*	− *3*	+ 5	− 1	1950
Total metals and engineering*	13	− *1*	− *5*	+ 7	*0*	1950
Metals	13	− *1*	− *4*	+ *7*	− *2*	1950
Machinery	13	− 3	− 4	+ 7	*0*	1950
Transport equipment	13	*0*	− *8*	+ 9	0	1950
Textiles	13	− 2	+ *1*	+ 3	− *2*	1950
Chemicals	13	*0*	− 1	+ *4*	− 2	1950
By area:						
Sterling area	13	− *2*	0	+ *6*	− 3	1950
Other primary producers*	13	− *1*	− *2*	+ *6*	− *4*	1950
North America*	13	+ *8*	− *6*	*0*	− *1*	1950
Western Europe*	13	− *3*	− 3	+ *7*	− 1	1950
Other elements of national expenditure						
Public authority current spending	1	− *3*	+ *1*	+ *2*	− 1	1954
Value of total stocks[c]	1	− **0.2**	− **0.4**	− **0.2**	+ **0.8**	1954
Total exports of goods and services	1	− *2*	− *2*	+ *2*	+ *1*	1954

(a) For the significance of italics and bold type, see page 52.
(b) The adjustment factors do not always sum to zero, partly because of rounding, partly because of quarterly differences in the absolute levels of the series to which the corrections relate.
(c) Adjustments are applied to the level of stocks ruling at the end of the quarter. The level of stocks at end-1957 is estimated to be about £8,420 million at 1954 market prices.
* Series marked with an asterisk are aggregates. The adjustments are applied to the constituent series; hence the adjustments to the aggregates may vary as the relative importance of the constituent series varies. Those shown here are those which apply to the four quarters of 1957.

Table 41. Estimates of seasonal variations in the volume of imports in selected categories

		Value of imports in 1957 £mn.	Per cent variations[a][b]			
			I	II	III	IV
Classes[c]						
A	Food, beverages and tobacco	1,496	+ *6.1*	− *4.4*	− *6.3*	+ *4.6*
C	Mineral fuels and lubricants	466	− *1.5*	+ 3.1	+ *3.4*	− *5.0*
Divisions[c]						
A/1-13	Food and beverages	1,411	+*10*	− *1*	− *9*	0
A/3	Dairy products	140	+*25*	*0*	−*18*	− *7*
A/4	Fish and fish preparations	33	+*18*	−*18*	−*21*	+*21*
A/6	Fruits and vegetables	230	− *6*	+*18*	− *5*	− *7*
A/7	Sugar and sugar preparations	155	+ *6*	+*14*	−*17*	− *4*
A/8	Coffee, tea and cocoa	190	+*28*	− *8*	−*17*	− *3*
A/12	Tobacco and tobacco manufactures	86	−*37*	−*47*	+*23*	+*61*
B/4	Wood	174	−*31*	−*17*	+*40*	+ *8*
B/6-9	Textile materials	354	+*20*	+ *2*	−*16*	− *6*
B/7	Wool and other animal hair	205	+*21*	+ *8*	−*22*	− *7*
B/8	Cotton	109	+*15*	− *4*	− *5*	− *6*
B/12	Miscellaneous animal and vegetable crude materials	41	+*18*	−*15*	− *3*	*0*
B/13	Animal and vegetable oils and fats	61	−*10*	+*33*	+ *1*	−*24*
C/2	Petroleum and petroleum products	441	− *2*	+ *2*	+ *4*	− 4
D/6-9	Textile manufactures	89	+ *8*	− *3*	− *5*	*0*
Commodities[d]						
Beef and veal, all sources		66	− *3*	−*23*	+*19*	+ *7*
Mutton and lamb, all sources		68	+ *7*	+*19*	− *7*	−*19*
Bacon, all sources		82	+*14*	+ *7*	− *4*	−*17*
Butter, Denmark		26	−*33*	+*37*	+*20*	−*24*
Butter, Australia, New Zealand		53	+*25*	+*29*	−*31*	−*23*
Cheese, New Zealand		16	+*45*	+*18*	−*20*	−*43*
Wheat, Canada and U.S.A.		84	−*13*	+ *4*	+*11*	− *2*
Barley, Canada		11	−*52*	−*17*	+*67*	+ *2*
Maize, U.S.A.		32	+*42*	−*15*	−*30*	+ *3*
Sugar, all sources		144	−*18*	+*20*	+ *6*	− *8*
Sugar, Northern Hemisphere		93	−*36*	+*47*	+*23*	−*34*
Sugar, Southern Hemisphere		51	+*33*	−*44*	−*41*	+*52*
Tea, all sources		134	+*16*	−*29*	− *9*	+*22*
Tobacco, Rhodesia		20	−*59*	−*67*	+*68*	+*58*
Tobacco, U.S.A.		47	−*52*	−*82*	+*12*	+*122*
Wool, all sources		189	+*17*	+*15*	−*17*	−*15*
Cotton, all grades, all sources		108	+*16*	− *2*	− *8*	− *6*
Cotton, $\frac{7}{8}$—$1\frac{1}{4}$, U.S.A.		85	+*71*	− *8*	−*60*	− *3*
Softwood, all sources		118	−*35*	−*21*	+*39*	+*17*

(a) See page 52 for the significance of italics.
(b) Mean percentage quarterly deviations from the geometric moving average.
(c) Based on 1954-57.
(d) Based on 1947-57.

STATISTICAL APPENDIX

The Home Economy

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Symbols and conventions used

.. = not available.

— = nil or less than half the final digit shown.

billion = thousand millions.

Items may not always add to totals, because of rounding.

A horizontal bar across a column indicates a discontinuity in the series.

Italics are used where NIESR has added estimates to figures published elsewhere—for instance, when an estimated later figure is added.

Table 1. Gross domestic product

Seasonally adjusted

	Expenditure									Output					
	Consumers' expenditure	Public authorities' current spending	Gross fixed investment	Value of physical stock change	Exports of goods and services	Total final expenditure	*Less* Imports of goods and services (*a*)	Statistical discrepancy	Gross domestic product	Gross domestic product	Industrial production (*b*)	Agriculture, etc.	Transport, communication	Distribution	Other services
	£ million, 1954 factor cost, quarterly averages									*Index numbers, 1954 = 100*					
1948	2,262	584	433	+ 60	620	3,959	719	− 4	3,236	83	79.0	85	81	85	95
1949	2,329	634	472	+ 25	694	4,154	770	− 3	3,381	86	83.6	91	85	90	95
1950	2,406	629	497	− 65	794	4,261	776	+ 37	3,522	90	88.3	92	89	92	95
1951	2,363	679	500	+140	832	4,514	892	− 2	3,620	93	91.3	94	92	91	97
1952	2,343	752	503	—	816	4,414	809	− 29	3,576	91	89.2	97	95	88	98
1953	2,442	764	557	+ 35	811	4,609	861	− 19	3,729	95	94.3	98	98	94	99
1954	2,579	758	603	+ 13	879	4,832	903	—	3,929	100	100.0	100	100	100	100
1955	2,668	739	633	+ 79	933	5,052	996	+ 22	4,078	104	105.1	99	103	104	102
1956	2,697	736	664	+ 66	995	5,158	1,023	− 32	4,103	104	105.6	105	103	105	101
1957	2,755	710	692	+ 75	1,007	5,239	1,050	− 13	4,176	106	107.4	109	103	108	102
1958	2,809	708	694	+ 12	984	5,207	1,050	+ 12	4,169	106	106	109	102	109	103
1957 I	2,745	713	686	+115	998	5,257	1,062	− 37	4,158	106	107	108	102	107	102
II	2,760	723	685	+ 75	1,015	5,258	1,007	− 68	4,183	107	108	108	104	108	102
III	2,732	707	697	+ 95	1,016	5,247	1,091	+ 40	4,196	107	108	109	103	108	102
IV	2,785	697	699	+ 15	998	5,194	1,039	+ 12	4,167	106	107	109	103	108	102
1958 I	2,809	706	699	− 20	980	5,174	1,028	+ 22	4,168	106	107	109	101	107	102
II	2,794	712	685	− 30	958	5,120	1,017	+ 49	4,152	106	106	109	102	108	103
III	2,770	710	695	+ 75	998	5,248	1,092	− 7	4,149	106	105	108	102	109	103
IV	2,864	704	695	+ 25	998	5,286	1,064	− 14	4,208	107	106	108	103	112	104
1959 I	2,851	708	693	− 45	942	5,149	1,072	+145	4,222	108	108	108	104	111	104
II	*2,913*				*1,010*		*1,155*		*4,284*	*109*	110	*108*	*105*	*114*	*105*

See notes, page 69, for change to this table. (a) Not seasonally adjusted. (b) For details see table 2.

Table 2. Production and employment in industry

Index numbers, 1954 = 100, seasonally adjusted

	Production							Employment(*b*)							Output per person employed in industry
	Total industrial production	Building, contracting	Mining, public utilities	Total manufacturing	Metals, metal using	Textiles, leather, clothing	Other manufacturing	Total industrial production	Building, contracting	Mining, public utilities	Total manufacturing	Metals, metal using	Textiles, leather, clothing	Other manufacturing	
Weight(*a*)	1,000	120	120	760	374	114	272	11.38	1.31	1.24	8.83	4.31	1.70	2.82	
1948	79.0	86.7	82.1	77.3	75.6	87.3	75.4	91.8(*c*)	98.2(*c*)	96.3(*c*)	90.2(*c*)	90.2(*c*)	94.3(*c*)	87.8(*c*)	86
1949	83.6	90.7	85.8	82.2	80.0	94.2	80.1	93.3	98.3	97.3	92.0	90.0	98.6	91.1	90
1950	88.3	90.8	89.0	87.8	85.1	100.9	86.1	95.3	98.4	97.1	94.6	91.8	102.1	94.3	93
1951	91.3	87.3	93.0	91.6	90.3	99.9	90.3	97.3	98.9	98.0	97.0	94.5	102.9	97.4	94
1952	89.2	90.0	94.8	88.2	91.3	85.3	85.2	96.9	97.8	100.3	96.2	96.9	94.9	96.1	92
1953	94.3	96.3	96.3	93.7	93.4	98.4	92.1	97.9	98.6	100.5	97.4	97.1	99.1	96.9	96
1954	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100
1955	105.1	100.3	101.6	106.4	109.6	99.4	105.1	102.2	102.0	99.9	102.6	104.6	97.2	102.7	103
1956	105.6	105.8	103.6	105.9	108.3	98.9	105.6	102.9	105.0	99.6	103.1	105.9	95.9	103.1	103
1957	107.4	105.5	103.8	108.3	111.4	98.8	107.9	103.0	104.3	100.5	103.1	106.0	95.2	103.4	104
1958	106.2	105.0	103.3	106.9	110.3	91.2	108.4	101.4	102.3	99.3	101.6	105.4	89.8	103.1	105
1957 I	107	108	103	107	109	100	108	102.8	105.6	100.5	102.7	105.1	95.8	103.1	104
II	108	107	104	108	111	100	108	102.9	104.3	100.5	103.0	105.6	95.9	103.2	105
III	108	103	103	110	114	99	108	103.2	104.1	100.4	103.4	106.6	95.2	103.6	105
IV	107	105	104	108	112	94	107	102.9	103.4	100.5	103.2	106.8	93.7	103.5	104
1958 I	107	105	104	108	112	94	108	102.3	102.4	100.4	102.6	106.4	92.1	103.1	105
II	106	104	103	106	110	90	109	101.7	101.6	99.4	102.0	105.9	90.4	103.1	104
III	105	105	101	106	109	90	108	101.2	102.3	98.7	101.4	105.1	88.8	103.3	104
IV	106	107	104	107	109	92	110	100.5	102.7	98.5	100.5	104.1	87.8	102.7	106
1959 I	108	109	103	108	110	92	112	100.1	101.6	98.0	100.2	103.8	87.2	102.4	108
II	*110*	108	*103*	*111*				100.6	102.7	96.9	100.8	104.5	87.7	103.1	109
January	107		105	108	110	91	111	100.1	101.4	98.4	100.1	103.7	87.3	102.3	107
February	107	109	104	107	107	92	113	100.1	101.5	98.0	100.2	103.9	87.1	102.4	107
March	109		100	109	113	92	113	100.2	102.1	97.7	100.3	104.0	87.3	102.5	109
April	109		104	111	114	94	115	100.3	102.2	97.4	100.5	104.2	87.4	102.6	109
May	109	108	102	111	114	95	116	100.5	102.9	96.9	100.7	104.3	87.6	102.9	108
June	110		*104*	*111*				101.0	102.8	96.4	101.3	104.9	88.2	103.8	109
July	*111–12*							101.1	102.2	96.1	101.6	105.3	89.0	103.8	*110*

See notes, page 69, for change to this table.
(a) For employment, numbers in millions in 1954. (b) For employment in services, etc., see table 3.
(c) End-June, seasonally adjusted.

Table 3. The labour market

Seasonally adjusted

	Employment					Demand for labour			Unemployment by industry						Net overtime per head in manufacturing (*b*)
	Total civil employees	Agriculture etc.	Transport, communications	Distribution	Other services	Unemployment	Unfilled vacancies	Excess demand (*a*)	Metals, metal using	Textiles, leather, clothing	Other manufacturing	Building, contracting	Mining, public utilities	Transport, other services	
	Index numbers, 1954 = 100					*Percentage of total employees*									*Weekly hours*
1948	94.4(*c*)	113.7(*c*)	103.6(*c*)	88.0(*c*)	97.3(*c*)	1.50	2.30	0.68	1.54	0.87	1.35	2.64	0.41	1.62	..
1949	95.1	109.4	103.5	90.9	96.3	1.52	1.95	0.42	1.34	0.79	1.26	2.90	0.38	1.72	..
1950	96.5	111.0	103.1	91.8	97.0	1.53	1.77	0.27	1.18	0.84	1.28	2.83	0.41	1.80	..
1951	97.5	106.4	102.2	93.1	97.0	1.19	2.01	0.69	0.83	1.13	0.99	2.05	0.33	1.46	..
1952	97.4	104.0	102.0	94.4	97.3	1.99	1.34	−0.27	1.17	6.01	1.71	2.83	0.38	1.86	1.0
1953	98.0	101.1	100.7	96.6	97.6	1.64	1.33	−0.04	1.33	1.35	1.50	2.86	0.41	1.86	1.8
1954	100.0	100.0	100.0	100.0	100.0	1.34	1.56	0.29	0.92	1.05	1.18	2.50	0.36	1.58	2.0
1955	101.3	97.8	99.3	103.0	99.8	1.08	1.91	0.73	0.63	1.34	0.98	1.76	0.27	1.27	2.1
1956	102.1	91.6	99.5	105.7	100.8	1.19	1.66	0.46	0.94	1.23	1.08	2.01	0.29	1.30	1.9
1957	102.5	91.2	99.9	108.3	101.2	1.43	1.27	0.01	1.07	1.12	1.25	2.83	0.40	1.60	1.9
1958	101.7	89.5	98.6	108.4	102.1	2.10	0.90	−0.67	1.76	3.15	1.71	4.00	0.65	2.09	1.4
1957 I	102.3	93.4	100.1	107.5	101.0	1.51	1.26	−0.06	1.42	1.17	1.57	2.86	0.42	1.61	1.8
II	102.5	91.9	100.0	108.3	101.3	1.45	1.23	−0.04	1.13	1.16	1.27	2.93	0.39	1.65	2.0
III	102.6	90.2	99.6	108.6	101.2	1.37	1.31	0.10	0.81	1.00	1.03	2.71	0.38	1.59	2.0
IV	102.5	89.4	99.7	108.7	101.3	1.40	1.27	0.03	0.93	1.17	1.14	2.82	0.41	1.57	2.0
1958 I	102.1	88.3	99.4	108.1	101.5	1.71	1.09	−0.30	1.36	2.05	1.63	3.49	0.58	1.78	1.7
II	101.8	88.2	98.9	108.2	102.0	2.07	0.86	−0.68	1.72	3.46	1.71	3.91	0.63	2.05	1.2
III	101.7	89.8	98.2	108.6	102.4	2.22	0.80	−0.77	1.77	3.62	1.61	3.94	0.66	2.22	1.2
IV	101.3	91.9	98.0	108.8	102.3	2.40	0.85	−0.92	2.19	3.47	1.90	4.65	0.75	2.30	1.5
1959 I	100.9	87.4	97.5	108.6	102.2	2.51	0.85	−1.03	2.20	3.26	2.25	5.93	0.95	2.39	1.5
II	101.2	87.2	97.0	108.7	102.5	2.22	0.89	−0.76	1.96	2.36	1.84	4.49	0.95	2.29	1.8
March	100.9	86.2	97.3	108.7	102.3	2.39	0.82	−0.93	2.16	3.10	2.17	4.91	0.98	2.33	
April	101.0	85.7	97.0	108.4	102.5	2.36	0.83	−0.90	2.13	2.79	2.09	4.74	0.94	2.39	
May	101.1	88.1	97.0	108.4	102.4	2.24	0.88	−0.80	2.00	2.42	1.90	4.36	0.98	2.28	
June	101.5	87.7	96.9	109.2	102.5	2.08	0.96	−0.57	1.69	1.87	1.53	4.38	0.93	2.23	
July	101.6	87.1	96.6	109.2	102.9	2.10	1.07	−0.45	1.42	1.62	1.58	4.37	0.94	2.25	
August						2.07	1.09	−0.44	1.35	1.61	1.47	4.35	0.92	2.39	

See notes, page 69, for changes to this table. (a) NIESR index based on unemployment and vacancies. (b) Not seasonally adjusted. (c) End-June, seasonally adjusted.

Table 4. Prices

Index numbers, 1954 = 100

	Capital goods				Export prices	Retail prices	Consumer goods and services								Total final prices
	All assets	Plant, vehicles, etc.	Dwellings	Other building			Total	Food	Drink, tobacco	Housing (inc. rent and rates)	Durable goods	Clothing	All other goods	Services	
1948	78	76	79	81	78	75.7	79.7	67.8	99.1	79.4	84.9	82.2	82.9	79.7	78.4
1949	79	78	80	81	81	77.8	81.3	70.8	98.1	80.9	83.6	85.6	83.6	81.9	80.2
1950	81	81	81	81	85	79.9	83.5	74.8	97.0	83.1	87.0	86.6	85.7	84.4	83.0
1951	90	87	94	91	100	87.6	91.1	83.2	98.3	88.4	99.1	100.4	95.2	90.1	92.2
1952	99	97	104	100	105	95.3	96.5	92.5	99.6	92.5	105.9	100.1	100.4	95.3	98.2
1953	100	100	101	100	101	98.3	98.1	96.2	99.8	97.3	102.2	99.2	99.3	97.9	98.8
1954	100	100	100	100	100	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1955	105	104	106	106	102	104.5	103.4	105.9	100.5	103.5	101.4	100.6	103.1	104.0	103.5
1956	111	110	110	111	106	109.7	107.9	109.8	103.9	107.8	108.5	102.5	109.3	110.0	108.9
1957	115	116	113	116	111	113.8	111.0	112.3	106.3	114.9	110.4	104.1	113.0	113.7	112.9
1958	119	120	114	119	110	117.2	114.0	114.1	108.4	128.3	110.2	104.9	114.5	119.0	115.3
1957 I	112	112	112	112	110	112.1	109.4	110.1	105.0	110.2	110.2	103.2	112.1	112.5	111.2
II	114	114	113	114	110	112.9	110.6	112.7	105.9	113.3	110.8	103.8	111.7	112.6	112.6
III	116	117	114	117	112	114.4	111.6	113.8	106.2	114.7	110.8	104.5	112.6	114.1	113.4
IV	118	118	114	119	111	115.8	112.3	112.6	107.9	121.4	110.0	104.9	115.2	115.6	114.5
1958 I	118	120	114	118	110	116.2	113.5	112.7	108.0	124.2	111.8	105.3	115.8	118.3	114.9
II	119	120	114	119	110	117.9	114.5	115.7	109.3	127.3	110.7	105.4	114.1	118.4	115.9
III	119	120	116	120	110	116.6	113.6	112.6	108.1	130.1	109.6	104.5	113.5	119.3	115.0
IV	119	120	115	119	109	118.1	114.3	115.5	107.8	131.5	109.7	104.5	114.4	120.0	115.4
1959 I	118	119	112	117	109	118.6	115.2	115.8	108.2	134.4	110.3	104.5	115.2	119.2	116.4
II					109	117.5									
March					109	118.6	*115.2*	*115.5*	*108.2*	*134.7*	*110.3*	*104.6*	*115.4*	*119.7*	
April					109	117.7	*114.3*	*115.1*	*104.4*	*135.5*	*108.1*	*104.6*	*115.0*	*119.8*	
May					109	117.3	*113.9*	*114.6*	*104.4*	*135.7*	*108.1*	*104.6*	*112.2*	*119.9*	
June					109	117.5	*114.2*	*114.9*	*104.4*	*136.7*	*108.1*	*104.8*	*112.2*	*120.2*	
July					108	117.2	*113.8*	*113.8*	*104.5*	*137.1*	*108.0*	*104.7*	*112.4*	*120.4*	
August					108										

See note, page 69, for changes to this table.

Table 5. Wages, profits, and other costs

Index numbers, 1954 = 100

	Weekly wage rates	Wage rates by industry							Income from employment (a)		Profits of companies and public corporations	All property income		Import prices	Materials used in manufacturing industry
		Metals, metal-using	Textiles, leather, clothing	Other manufacturing	Mining, public utilities	Building, contracting	Agriculture forestry, fishing	Services	Total	Per unit of output		Total	Per unit of output		
1948	74.6	73.5	74.3	73.0	74.3	72.8	75.1	75.6	66.0	79.8	65.4	70.2	84.9	73	..
1949	76.7	76.0	77.6	75.5	74.9	74.7	77.8	77.3	70.4	81.5	68.4	73.2	84.7	74	..
1950	78.1	76.9	79.3	77.2	76.1	76.6	79.0	78.9	74.1	82.3	79.4	81.6	90.7	85	..
1951	84.6	83.5	86.0	84.1	83.5	83.0	84.5	84.9	82.5	89.2	93.7	90.0	97.3	113	..
1952	91.6	91.5	91.6	92.6	92.2	90.5	91.7	91.4	88.9	97.3	84.0	85.3	93.3	111	..
1953	95.8	95.8	96.0	96.6	95.6	95.4	95.9	95.6	93.7	98.3	89.9	91.3	95.8	101	..
1954	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100	100.0
1955	106.9	106.8	104.9	106.1	107.7	106.2	105.6	106.2	109.3	105.3	109.8	107.3	103.4	103	103.0
1956	115.4	115.5	112.0	114.8	118.3	114.2	113.8	114.2	119.2	114.0	113.3	111.7	106.8	105	106.7
1957	121.2	121.1	117.9	120.6	124.3	120.5	119.1	120.0	126.0	118.4	118.5	117.0	110.0	107	107.4
1958	125.4	125.4	122.3	125.6	127.4	125.5	126.4	124.6	130.8	123.4	114.1	118.9	112.2	99	100.8
1957 I	117.8	117.6	115.9	117.4	120.8	117.7	117.4	116.9	123.1	116.4	112.7	112.2	106.0	110	111.8
II	121.0	119.7	116.9	120.0	125.2	119.8	118.1	119.1	125.5	117.8	119.7	116.5	109.4	110	109.6
III	122.7	122.9	118.9	122.0	125.5	122.3	118.1	121.5	127.6	119.5	118.9	116.7	109.3	106	106.3
IV	123.3	124.0	119.8	122.9	125.6	122.3	122.8	122.5	127.8	120.5	122.7	122.5	115.5	102	101.9
1958 I	123.9	124.3	120.7	124.0	125.8	123.7	125.6	123.1	129.7	122.2	107.0	113.8	107.3	99	100.0
II	124.3	124.4	122.1	124.5	126.1	124.5	125.6	123.4	130.4	123.4	115.2	119.0	112.6	99	101.0
III	125.6	124.9	122.9	126.0	126.7	126.8	125.6	125.4	131.0	124.1	111.9	117.4	111.2	98	100.9
IV	127.7	127.9	123.5	127.8	130.9	127.0	128.6	126.6	132.1	123.3	122.1	125.4	117.1	99	101.2
1959 I	128.2	128.7	124.1	128.0	130.9	128.4	130.6	127.2	133.1	123.8	112.2	119.0	110.7	98	101.7
II	128.5	129.0	124.5	128.5	131.0	129.1	130.6	127.6	*135.0*	*123.7*				97	101.4
March	128.4	129.0	124.1	128.1	131.0	129.1	130.6	127.5						97	100.7
April	128.4	129.0	124.3	128.3	131.0	129.1	130.6	127.5						96	101.4
May	128.5	129.0	124.6	128.5	131.0	129.1	130.6	127.6						97	101.7
June	128.5	129.0	124.7	128.7	131.0	129.1	130.6	127.6						97	101.2
July	128.7	129.0	124.6	128.9	131.0	129.1	130.6	127.8						97	100.8
August														98	

(a) Seasonally adjusted, except for ' wage-round ' effect.

Table 6. Personal income and expenditure

£ million, quarterly averages, seasonally adjusted

	Disposable income (a)	Total personal savings	Consumers' expenditure	Consumers' expenditure											
				Total	Food	Alcoholic drinks	Tobacco	Housing (inc. rent and rates)	Fuel, light	Clothing	Durable goods: Cars, motor cycles(b)	Durable goods: Furniture, etc.	Durable goods: Radio, electric, etc.	All other goods	Services
	at current prices			*at 1954 prices*											
1948	2,157	38	2,119	2,658	836	201	200	235	109	274	13	56	36	238	460
1949	2,274	62	2,212	2,721	872	194	194	234	108	296	16	68	40	260	439
1950	2,393	53	2,340	2,803	914	198	196	238	113	307	17	77	45	271	427
1951	2,592	80	2,512	2,757	887	204	202	239	117	276	16	74	50	262	430
1952	2,821	162	2,659	2,756	878	202	206	244	115	271	23	67	46	262	442
1953	3,001	185	2,816	2,869	911	205	209	252	117	275	40	77	57	284	442
1954	3,160	154	3,006	3,006	945	204	214	263	122	293	55	87	69	306	448
1955	3,439	223	3,216	3,111	969	215	219	257	124	315	74	90	73	327	448
1956	3,696	310	3,386	3,137	991	218	222	261	129	327	57	86	66	335	446
1957	3,892	339	3,553	3,201	1,006	223	228	263	127	332	63	92	73	347	447
1958	4,076	345	3,731	3,274	1,023	223	232	268	137	330	84	97	79	364	437
1957 I	3,796	321	3,475	3,183	1,015	222	227	263	126	329	44	91	76	340	450
II	3,871	322	3,549	3,211	998	224	231	263	126	330	79	94	74	345	447
III	3,909	362	3,547	3,178	985	221	226	264	124	334	71	90	74	350	439
IV	3,993	354	3,639	3,230	1,027	226	229	264	131	334	57	91	69	352	450
1958 I	4,036	331	3,705	3,270	1,031	226	229	267	141	326	84	93	76	363	434
II	4,065	336	3,729	3,260	1,014	220	235	267	142	322	97	94	78	358	433
III	4,072	406	3,666	3,233	1,005	219	233	268	128	328	76	92	76	368	440
IV	4,133	308	3,825	3,333	1,043	226	233	269	136	342	77	109	87	368	443
1959 I	4,181	375	3,806	3,318	1,033	219	228	269	143	334	88	102	89	382	431
II	*4,280*	*405*	*3,875*	*3,420*	*1,052*	233	241	269	*138*	347	114	113	105	379	*429*

See note, page 69, for changes to this table. (a) Seasonally adjusted, except for ' wage-round ' effect. (b) Unadjusted.

Table 7. Fixed investment

£ million, 1954 prices, quarterly averages, seasonally adjusted

	Total	Dwellings		Industries and services										
					By type of asset			By industry group					By sector	
		Public	Private	Total	Plant, machinery	Vehicles, ships, aircraft	Buildings, works	Fuel, power	Public, social services	Transport, communications	Manufacturing	Other industries, services	Public	Private
1948	455	92	14	349	167	91	91	53	29	45	114	109	108	241
1949	496	87	17	392	182	97	113	65	35	50	128	114	140	252
1950	521	86	16	419	203	87	129	70	42	48	147	114	154	266
1951	521	84	16	422	219	78	124	70	45	45	154	108	175	247
1952	527	95	24	408	208	70	130	73	44	41	149	102	186	223
1953	586	114	42	430	210	82	139	81	46	45	145	113	202	228
1954	637	105	56	476	233	90	152	96	48	48	153	132	208	267
1955	668	85	60	523	251	104	169	102	49	51	170	152	216	307
1956	701	77	64	561	257	110	194	97	56	58	193	157	227	334
1957	734	72	64	599	276	118	206	100	61	71	202	167	246	353
1958	734	60	67	607	275	122	210	104	65	69	191	178	248	359
1956 III	698	79	64	555	255	105	195	94	57	59	195	150	228	327
IV	720	76	64	580	265	115	200	94	58	63	202	163	231	349
1957 I	726	76	66	584	271	105	208	95	58	65	207	159	233	351
II	726	73	65	588	273	112	203	95	60	71	206	156	239	349
III	742	70	60	612	277	130	205	98	62	72	202	178	248	364
IV	743	67	63	613	282	125	206	110	62	75	193	173	264	349
1958 I	742	64	63	615	280	124	211	108	63	68	195	181	255	360
II	727	61	65	601	275	116	210	103	62	73	193	170	245	356
III	736	59	69	608	273	125	210	105	66	62	193	182	239	369
IV	735	59	69	607	270	123	214	103	69	72	183	180	255	352
1959 I	734	61	77	596	262	117	217	108	76	63	173	176	254	342

Table 8. Building orders and work done (a)

£ million, 1954 prices, quarterly averages

	Housing	Other buildings and works		
		Public	Private	
			Industrial	Other
	New orders received			
1957 I	143	90	52	44
II	116	81	48	46
III	110	100	44	41
IV	100	72	43	41
1958 I	107	96	46	42
II	105	77	39	40
III	109	67	41	38
IV	131	79	33	39
1959 I	163	82	44	47
II	147	87	49	48
	New work done			
1957 I	126	77	60	39
II	128	83	62	39
III	118	82	59	40
IV	118	82	57	42
1958 I	110	79	58	41
II	116	87	55	43
III	113	90	57	42
IV	113	91	56	44
1959 I	118	85	52	42
II	128	98	53	42

See notes, page 69, for changes to this table.
(a) New orders received and work done by contractors in building and civil engineering.

Table 9. Changes in the volume of stocks

£ million, 1954 prices, quarterly averages

	Total stocks (a)	Manufacturing and Distribution							
		Total	Manufacturing				Wholesale		Retail
			Total	Materials and fuel	Work in progress	Finished goods	Industrial materials	Manufactured goods	
Value at end 1957	8,183	6,039	4,231	1,833	1,436	962	319	700	789
1956	+ 66	+ 56	+ 47	+12	+22	+13	− 3	+ 6	+ 6
1957	+ 75	+ 89	+ 57	+14	+26	+17	+ 7	+17	+ 8
1958	+ 12	− 10	− 11	−40	+ 9	*+21*	− 5	+ 2	+ 4
1956 I	+125	..	+ 93	+ 6	+51	+37	..	..	+45
II	+105	..	+ 54	−27	+32	+49	..	..	−22
III	+ 55	..	+ 24	+45	+ 3	−24	..	..	+ 9
IV	− 20	− 29	+ 15	+22	+ 1	− 8	+13	−47	−10
1957 I	+200	+203	+104	+33	+27	+44	−15	+75	+39
II	+ 85	+ 84	+ 54	−33	+57	+30	− 7	+37	—
III	+ 80	+ 96	+ 65	+46	+42	−23	+24	+ 7	—
IV	− 65	− 39	+ 5	+11	−23	+17	+24	−51	− 7
1958 I	+ 65	+ 75	+ 42	−50	+27	+65	−16	+17	+32
II	− 20	− 30	+ 7	−74	+24	+57	−27	+ 7	−17
III	+ 65	+ 3	− 44	− 6	+ 2	−40	+21	+19	+ 7
IV	− 55	− 89	− 49	−31	−19	+ 1	+ 1	−35	− 6
1959 I	+ 40	+ 2	− 11	−16	− 4	+ 9	−23	+15	+21
II		*− 15*	*− 7*	*− 5*	*+23*	*−25*	*−30*		+22

See notes, page 69, for changes to this table.
(a) This series is seasonally adjusted in table 1.

Table 10. Finance

Quarterly averages

	Money supply : per cent of total final sales	London Clearing Banks		New capital issues				Treasury bills outstanding	Hire purchase debt			Yields	
		Liquidity ratio	Advances										
			Total	Nationalised industries	Overseas	Local authorities	Manufacturing, distribution	Other		Total	Owing to finance houses	Owing to household goods shops	On 2½% Consols	On ordinary shares
	per cent		*£mn., change in period*		*£ million*				*£ million, change in period*				*per cent*	
1948	50.1	28.8	+ 43	..	9.5	—	29.7	30.2	− 29	..	..	..	3.21	4.62
1949	47.4	32.1	+ 36	..	10.5	—	25.8	3.0	− 71	..	..	..	3.30	5.49
1950	44.8	39.0	+ 30	..	13.0	—	36.5	40.5	− 29	..	..	..	3.54	5.27
1951	39.1	37.4	+ 72	..	12.5	—	34.5	26.0	−212	..	..	..	3.78	5.78
1952	37.5	34.4	− 45	..	13.1	—	28.0	55.6	− 20	..	..	..	4.23	6.46
1953	37.1	35.1	− 10	..	14.3	4.8	27.7	61.8	+ 28	..	..	..	4.08	6.06
1954	36.5	33.7	+ 48	..	19.8	4.5	43.4	64.9	+100	..	..	..	3.75	5.40
1955	34.0	32.5	− 11	..	15.9	2.2	47.7	92.8	+ 86	..	..	..	4.17	5.43
1956	31.4	35.3	+ 15	..	13.1	13.5	53.5	11.2	−131	*− 21*	*− 8*	*−13*	4.73	6.25
1957	30.6	35.1	− 8	− 8	16.3	6.4	58.0	11.1	+181	*+ 18*	*+21*	*− 3*	4.98	6.27
1958	31.0	34.0	+ 91	—	18.5	15.2	38.3	17.9	− 83	+ 28	+19	+ 9	4.98	6.23
1957 III	30.7	35.4	−126	−12	16.8	—	21.5	5.3	+207	*+ 37*	*+40*	*− 3*	5.16	6.14
IV	30.5	37.2	− 73	+34	11.9	6.6	89.3	14.7	+796	+ 23	+12	+11	5.44	6.96
1958 I	31.1	35.9	+ 36	−28	18.0	27.4	64.0	10.8	−1113	+ 3	+13	−10	5.19	6.99
II	31.0	32.8	+112	+20	27.0	12.7	50.7	8.6	+282	+ 18	+23	− 5	4.99	6.49
III	31.2	33.5	− 2	− 5	7.4	15.8	21.0	39.4	+163	+ 12	+ 8	+ 4	4.90	5.96
IV	30.7	33.8	+218	+14	21.7	5.0	17.2	12.9	+335	+ 78	+32	+46	4.85	5.46
1959 I	31.8	32.7	+238	− 6	25.8	5.0	65.9	47.9	−415	+ 57	+42	+15	4.76	5.30
II		31.4	+132	− 9	5.1	16.4	39.9	56.3	+168	+ 92	+70	+22	4.84	5.00
March		30.9	+339	+14					−191	+ 60	+51	+ 9	4.82	5.27
April		31.2	+144	+ 4					+119	+ 78	+60	+18	4.83	5.10
May		30.9	+165	− 3					+ 45	+ 96	+72	+24	4.87	4.94
June		32.3	+ 87	−27					+339	+102	+78	+24	4.83	4.97
July		32.7	+252	−10					+355	+102	+75	+27	4.74	5.09
August		32.9	+106											

See notes, page 69, for changes to this table.

Table 11. U.K. imports and exports and changes in imported stocks

Quarterly averages

	Imports				Exports (exc. re-exports)				Balance of visible trade as recorded (*b*)	Terms of trade import/export	Stock changes of mainly imported commodities				
	Value c.i.f.		Volume		Value f.o.b.		Volume				Total	Total	Food and tobacco	Industrial materials	Fuel
	As recorded	Adjusted (*a*)	As recorded	Adjusted (*a*)	As recorded	Adjusted (*a*)	As recorded	Adjusted (*a*)							
	£mn.		*1954 = 100*		*£mn.*		*1954 = 100*		*£mn.*	*1954 = 100*	*Current prices*	*1954 prices, £mn. c.i.f.*			
1950	648	648	89	89	546	550	101	100	− 82	100	−30.3	−33.4	−14.1	−20.1	+ 0.8
1951	971	971	100	100	649	651	100	98	−292	113	+32.0	+19.7	+10.4	+ 2.0	+ 7.3
1952	864	864	92	92	641	641	94	92	−188	106	+20.8	+20.5	+ 2.1	+13.4	+ 5.0
1953	829	829	99	99	639	644	96	95	−164	100	+22.0	+16.9	+ 9.6	+ 3.8	+ 3.5
1954	837	837	100	100	662	666	100	100	−150	100	− 5.0	− 5.0	− 2.1	− 5.7	+ 2.8
1955	964	964	112	112	719	712	107	105	−216	101	+ 2.0	+ 2.0	− 4.5	+ 1.8	+ 4.7
1956	965	973	111	112	785	784	113	112	−145	99	−13.3	−12.1	− 0.6	−10.9	− 0.6
1957	1,011	1,003	115	114	823	821	116	113	−156	96	+25.2	+21.9	+ 5.9	+ 8.0	+ 8.0
1958	938	933	115	114	793	793	111	110	−110	90	− 1.3	− 1.0	− 0.3	− 1.5	+ 0.8
1957 III	991	991	113	113	788	828	110	114	−175	95	+30.3	+30.7	−21.1	+33.5	+18.3
IV	979	979	116	116	831	813	117	113	−114	92		+15.3	+13.6	+ 4.6	− 2.9
1958 I	929	929	114	114	813	803	113	110	− 76	90	−27.8	−19.7	+ 2.3	−15.5	− 6.5
II	901	921	110	113	767	799	108	110	− 99	90		−31.5	−20.7	− 4.9	− 5.8
III	939	919	113	111	776	776	109	108	−128	90	+25.3	+14.2	− 9.3	+17.4	+ 6.1
IV	986	966	121	119	815	797	115	111	−136	90		+33.5(c)	+25.0	− 0.7	+ 9.2
1959 I	942	962	117	119	790	780	111	107	−117	90	*− 4.1*	+ 5.2	+14.3	− 8.6	− 0.5
II	988	988	123	123	845	835	118	114	−106	89		*−13.4*	*−32.1*	*− 4.3*	*+23.0*
April	1,037	1,037	..	129	887	874	..	120	−117	88					
May	933	933	..	116	898	858	..	118	− 4	89					
June	995	995	..	123	755	776	..	106	−210	89					
July	1,059	1,059	..	131	863	850	..	117	−167	90					
August	916	916	..	*111*	766	799	..	110	−122	91					

(a) Both imports and exports are adjusted for dock strikes, delays, and certain other statistical disturbances ; exports are adjusted for seasonal movements and for working days, and exclude lend-lease silver. (b) Exports and re-exports less imports. (c) This figure is not adjusted for accelerated clearances at end of 1958.

Table 12. Volume of U.K. imports, by commodity

Index numbers, 1954 = 100

	Food and beverages	Tobacco	Basic materials					Fuels		Semi-manufactures and manufactures mainly for industrial use				Finished manufactures	
			Total	Textile materials	Wood	Pulp	Ores and scrap	Total	Petroleum and products	Total	Iron and steel	Non-ferrous metals	Textile manufactures	Total	Machinery
Value 1958 £mn	1,406	87	899	247	141	98	138	441	434	586	47	175	85	316	166
1950	92	97	97	110	77	72	88	65	68	86	139	78	121	74	80
1951	101	113	102	96	120	87	82	86	88	111	150	91	152	76	86
1952	91	71	90	88	83	73	90	83	87	97	352	103	71	107	142
1953	102	104	101	110	101	82	95	90	94	86	198	85	65	115	118
1954	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1955	107	111	106	98	114	118	112	121	107	126	363	109	107	122	124
1956	109	102	102	100	92	113	114	115	112	121	379	101	120	136	137
1957	114	103	106	101	101	112	126	114	115	122	215	110	129	152	145
1958	120	101	94	89	89	111	94	124	129	119	139	114	124	166	153
1956 I	114	76	100	110	63	92	103	120	113	129	502	97	126	138	141
II	113	50	104	107	76	115	115	122	117	125	433	101	122	136	139
III	98	111	105	81	130	126	127	121	118	112	318	97	114	123	125
IV	109	172	99	101	100	120	111	98	98	116	264	108	119	147	142
1957 I	126	64	109	132	64	105	109	102	101	119	222	102	133	156	140
II	111	61	107	104	93	117	124	117	117	118	206	104	126	158	140
III	104	136	106	79	141	112	142	125	127	122	209	112	120	142	141
IV	114	151	103	88	107	115	127	112	114	129	222	123	137	153	159
1958 I	120	51	95	98	57	102	104	114	118	125	194	114	139	160	147
II	119	68	92	92	74	110	106	116	121	113	153	107	108	159	147
III	117	133	90	64	126	113	87	128	134	118	116	124	111	169	150
IV	124	152	97	100	100	118	77	137	144	122	93	110	139	178	167
1959 I	128	42	93	110	59	114	74	134	140	120	96	115	135	166	161
II	121	78	100	109	90	115	76	154	162	131	149	121	135	205	191

Table 13. Volume of U.K. exports, by commodity and area

Index numbers, 1954 = 100, seasonally adjusted

	By commodity										By area			
			Manufactures											
	Food, beverages, tobacco	Basic materials, fuels	Total	Metals and engineering				Textiles	Chemicals	Other manufactures (a)	Sterling area	Other primary producers	North America	Western Europe
				Total	Metals	Metal goods (a)	Machinery	Transport equipment						
Value 1958 £mn	188	240	2,665	1,813	280	186	788	559	254	262	335	1,429	366	461	835
1950	93	78	106	102	106	101	99	105	125	79	121	94	129	105	94
1951	95	61	105	100	80	103	104	101	126	92	118	101	114	100	90
1952	91	77	96	98	84	97	106	93	94	77	100	91	111	94	89
1953	94	93	96	97	94	105	100	92	103	79	97	94	93	112	96
1954	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1955	106	100	109	110	113	114	110	106	96	116	112	106	102	115	107
1956	115	103	115	118	126	110	117	121	92	127	113	105	113	137	116
1957	124	96	117	121	139	105	120	123	92	137	113	105	120	143	116
1958	120	98	113	118	135	90	114	127	78	134	112	101	114	153	107
1957 I	114	103	117	119	148	108	117	113	95	139	113	103	112	138	123
II	129	97	118	123	145	109	121	122	94	137	111	107	118	146	117
III	124	92	118	123	131	101	121	132	92	136	113	107	122	148	114
IV	129	93	116	121	133	101	120	126	85	134	113	105	127	141	111
1958 I	113	97	114	118	126	93	116	126	87	135	113	105	116	147	107
II	121	92	107	112	128	88	109	118	76	127	107	97	112	147	102
III	128	100	116	123	140	85	117	140	77	143	110	104	119	148	112
IV	119	101	114	120	148	94	113	126	74	133	117	99	110	168	107
1959 I	102	106	110	114	135	82	110	124	74	142	110	90	117	167	109
II	119	107	118	121	130	92	118	135	81	156	115	97	109	198	116

(a) Unadjusted.

Table 14. Trade of industrial countries

$ billion, quarterly averages

	Total (a)			U.S.A.			Canada			U.K.			Continental O.E.E.C. (a)		
	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance
1948	8.29	9.15	−0.86	3.17	2.01	+1.16	0.84	0.76	+0.08	1.65	2.09	−0.44	2.57	4.12	−1.54
1949	8.66	9.03	−0.37	3.02	1.88	+1.14	0.77	0.73	+0.04	1.71	2.13	−0.42	3.03	4.06	−1.03
1950	8.43	9.38	−0.95	2.57	2.40	+0.17	0.77	0.80	−0.03	1.58	1.82	−0.24	3.31	4.12	−0.81
1951	11.32	12.77	−1.45	3.76	2.97	+0.79	1.01	1.05	−0.04	1.90	2.73	−0.84	4.31	5.52	−1.20
1952	11.99	12.43	−0.43	3.80	2.92	+0.89	1.19	1.12	+0.07	1.91	2.43	−0.52	4.77	5.45	−0.68
1953	12.16	12.42	−0.26	3.95	2.95	+1.00	1.15	1.21	−0.06	1.88	2.34	−0.46	4.86	5.32	−0.46
1954	12.61	12.78	−0.17	3.78	2.76	+1.02	1.11	1.14	−0.03	1.94	2.36	−0.42	5.37	5.92	−0.55
1955	13.85	14.52	−0.67	3.89	3.09	+0.80	1.20	1.29	−0.09	2.12	2.72	−0.60	6.14	6.80	−0.66
1956	15.78	16.32	−0.53	4.77	3.44	+1.34	1.32	1.57	−0.25	2.32	2.72	−0.40	6.75	7.78	−1.03
1957	17.22	17.65	−0.43	5.21	3.54	+1.66	1.37	1.59	−0.22	2.42	2.85	−0.43	7.51	8.60	−1.08
1958	16.40	16.36	+0.04	4.46	3.50	+0.96	1.36	1.45	−0.09	2.35	2.65	−0.30	7.51	8.01	−0.50
1956 I	14.30	15.43	−1.13	4.23	3.50	+0.73	1.12	1.37	−0.25	2.28	2.75	−0.47	6.12	7.12	−1.00
II	16.11	16.63	−0.52	4.92	3.41	+1.51	1.36	1.71	−0.35	2.39	2.77	−0.38	6.84	7.93	−1.09
III	15.42	16.00	−0.58	4.71	3.39	+1.32	1.37	1.53	−0.16	2.15	2.62	−0.47	6.57	7.64	−1.07
IV	17.28	17.15	+0.13	5.22	3.44	+1.78	1.43	1.63	−0.20	2.46	2.73	−0.27	7.45	8.45	−1.00
1957 I	17.09	17.90	−0.81	5.44	3.52	+1.92	1.23	1.53	−0.30	2.45	2.96	−0.51	7.32	8.82	−1.50
II	17.37	18.19	−0.82	5.47	3.49	+1.98	1.35	1.75	−0.40	2.47	2.91	−0.46	7.41	8.76	−1.36
III	16.77	17.22	−0.45	4.91	3.50	+1.41	1.47	1.58	−0.11	2.31	2.79	−0.48	7.31	8.28	−0.97
IV	17.61	17.27	+0.34	5.00	3.67	+1.33	1.42	1.48	−0.06	2.45	2.75	−0.30	7.98	8.50	−0.52
1958 I	15.94	16.26	−0.32	4.40	3.44	+0.96	1.18	1.31	−0.13	2.41	2.61	−0.20	7.24	8.10	−0.86
II	16.20	16.28	−0.08	4.57	3.43	+1.14	1.44	1.55	−0.09	2.27	2.55	−0.28	7.24	7.97	−0.73
III	15.82	15.76	+0.06	4.17	3.33	+0.84	1.36	1.39	−0 03	2.30	2.65	−0.35	7.30	7.66	−0.36
IV	17.63	17.12	+0.51	4.71	3.79	+0.92	1.45	1.54	−0.09	2.42	2.77	−0.35	8.25	8.30	−0.05
1959 I	15.60	16.33	−0.73	4.14	3.87	+0.27	1.14	1.38	−0.24	2.31	2.64	−0.33	7.28	7.67	−0.39
II	17.26	18.14	−0.88	4.45	4.17	+0.28	1.48	1.77	−0.29	2.45	2.77	−0.32	8.07	8.48	−0.41

(a) Excludes W. Germany in 1948 and 1949 and Spain throughout.

Table 14 (contd.). Trade of industrial countries

$ billion, quarterly averages

	Western Germany			France			Italy			Netherlands			Japan		
	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance
1948	..	..	..	0.50	0.86	−0.36	0.27	0.38	−0.12	0.26	0.47	−0.21	0.06	0.17	−0.11
1949	..	..	..	0.68	0.82	−0.14	0.28	0.39	−0.11	0.34	0.46	−0.13	0.13	0.23	−0.10
1950	0.49	0.67	+0.18	0.76	0.76	—	0.30	0.37	−0.07	0.35	0.51	−0.16	0.20	0.24	−0.04
1951	0.87	0.87	−0.01	1.02	1.11	−0.09	0.41	0.54	−0.13	0.49	0.64	−0.15	0.34	0.50	−0.16
1952	1.00	0.95	+0.05	0.96	1.08	−0.12	0.35	0.58	−0.24	0.53	0.56	−0.03	0.32	0.51	−0.19
1953	1.10	0.94	+0.15	0.95	0.99	−0.04	0.38	0.60	−0.23	0.54	0.59	−0.06	0.32	0.60	−0.28
1954	1.31	1.14	+0.17	1.05	1.06	−0.01	0.41	0.61	−0.20	0.60	0.71	−0.11	0.41	0.60	−0.19
1955	1.53	1.45	+0.09	1.23	1.18	+0.04	0.46	0.68	−0.21	0.67	0.80	−0.13	0.50	0.62	−0.11
1956	1.84	1.65	+0.19	1.13	1.39	−0.25	0.54	0.79	−0.26	0.72	0.93	−0.21	0.62	0.81	−0.18
1957	2.14	1.87	+0.27	1.28	1.54	−0.26	0.63	0.91	−0.27	0.77	1.03	−0.25	0.71	1.07	−0.36
1958	2.20	1.84	+0.36	1.28	1.40	−0.12	0.63	0.79	−0.16	0.81	0.91	−0.10	0.72	0.76	−0.04
1956 I	1.56	1.45	+0.11	1.07	1.26	−0.19	0.50	0.76	−0.26	0.67	0.85	−0.18	0.55	0.69	−0.14
II	1.89	1.65	+0.24	1.17	1.47	−0.30	0.50	0.80	−0.30	0.74	0.93	−0.19	0.60	0.81	−0.21
III	1.82	1.69	+0.13	1.06	1.33	−0.27	0.55	0.76	−0.21	0.70	0.94	−0.24	0.62	0.82	−0.20
IV	2.08	1.83	+0.25	1.23	1.48	−0.25	0.60	0.83	−0.23	0.76	0.99	−0.23	0.72	0.90	−0.18
1957 I	2.00	1.81	+0.19	1.33	1.69	−0.36	0.59	0.92	−0.33	0.76	1.08	−0.32	0.65	1.06	−0.41
II	2.11	1.81	+0.30	1.29	1.68	−0.39	0.63	0.94	−0.31	0.72	1.04	−0.33	0.67	1.28	−0.61
III	2.15	1.87	+0.27	1.16	1.43	−0.27	0.65	0.85	−0.20	0.78	1.01	−0.23	0.77	1.07	−0.30
IV	2.31	2.00	+0.32	1.32	1.36	−0.04	0.67	0.92	−0.25	0.84	0.97	−0.14	0.76	0.87	−0.11
1958 I	2.06	1.82	+0.23	1.27	1.51	−0.24	0.61	0.82	−0.21	0.77	0.87	−0.10	0.71	0.80	−0.09
II	2.13	1.72	+0.41	1.22	1.52	−0.30	0.63	0.81	−0.18	0.76	0.90	−0.14	0.68	0.78	−0.09
III	2.23	1.83	+0.40	1.15	1.26	−0.11	0.64	0.76	−0.12	0.81	0.88	−0.07	0.69	0.73	−0.04
IV	2.39	1.99	+0.40	1.47	1.32	+0.15	0.65	0.78	−0.13	0.88	0.97	−0.09	0.80	0.72	+0.08
1959 I	2.12	1.80	+0.32	1.18	1.20	−0.02	0.63	0.76	−0.13	0.81	0.90	−0.09	0.73	0.79	−0.06
II	2.40	2.04	+0.36	1.42	1.31	+0.11	0.65	0.84	−0.19	0.88	0.99	−0.11	0.81	0.95	−0.14

Table 15. Trade of primary producing countries

$ billion, quarterly averages

	Total			Overseas sterling area (excluding oil producers)(a)			Australia			New Zealand			India		
	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance
1948	5.30	5.94	−0.64	1.98	2.35	−0.37	0.41	0.35	+0.06	0.12	0.11	+0.01	0.34	0.43	−0.09
1949	5.08	5.87	−0.79	1.93	2.40	−0.47	0.40	0.40	—	0.14	0.11	+0.03	0.33	0.51	−0.18
1950	5.90	5.51	+0.39	2.19	2.14	+0.05	0.42	0.41	+0.01	0.13	0.11	+0.01	0.29	0.29	—
1951	7.43	7.61	−0.18	2.75	3.03	−0.28	0.51	0.61	−0.10	0.17	0.15	+0.02	0.40	0.45	−0.05
1952	6.65	7.61	−0.96	2.26	2.85	−0.59	0.42	0.49	−0.07	0.17	0.19	−0.03	0.32	0.42	−0.10
1953	6.79	6.79	—	2.23	2.43	−0.20	0.49	0.37	+0.13	0.16	0.13	+0.03	0.28	0.30	−0.02
1954	7.08	7.21	−0.13	2.23	2.60	−0.37	0.41	0.47	−0.05	0.17	0.17	—	0.30	0.32	−0.03
1955	7.53	7.79	−0.26	2.40	2.91	−0.51	0.44	0.54	−0.10	0.18	0.20	−0.02	0.32	0.35	−0.03
1956	7.97	8.23	−0.26	2.50	3.06	−0.56	0.47	0.49	−0.02	0.19	0.19	+0.01	0.32	0.42	−0.10
1957	8.25	9.31	−1.06	2.59	3.37	−0.78	0.55	0.48	+0.07	0.19	0.21	−0.01	0.35	0.51	−0.16
1958	7.95	8.93	−0.98	2.43	3.32	−0.89	0.41	0.51	−0.10	0.17	0.20	−0.03	0.30	0.41	−0.11
1956 I	7.93	8.03	−0.10	2.50	3.06	−0.56	0.34	0.51	−0.17	0.23	0.18	+0.05	0.34	0.42	−0.08
II	7.99	8.23	−0.24	2.52	3.06	−0.54	0.54	0.51	+0.03	0.20	0.18	+0.02	0.27	0.40	−0.13
III	7.65	8.07	−0.42	2.35	3.04	−0.69	0.41	0.48	−0.07	0.18	0.20	−0.02	0.30	0.44	−0.14
IV	8.10	8.26	−0.16	2.66	3.07	−0.41	0.59	0.43	+0.17	0.16	0.18	−0.02	0.35	0.44	−0.09
1957 I	8.43	8.71	−0.28	2.82	3.23	−0.41	0.62	0.44	+0.18	0.22	0.18	+0.04	0.34	0.48	−0.14
II	8.32	9.42	−1.10	2.58	3.39	−0.81	0.57	0.48	+0.09	0.20	0.20	—	0.31	0.55	−0.24
III	8.06	9.41	−1.35	2.40	3.39	−0.99	0.46	0.49	−0.03	0.19	0.23	−0.04	0.37	0.52	−0.15
IV	8.19	9.59	−1.40	2.55	3.35	−0.80	0.55	0.50	+0.05	0.15	0.22	−0.07	0.35	0.46	−0.11
1958 I	8.11	9.02	−0.91	2.60	3.41	−0.81	0.42	0.52	−0.10	0.22	0.20	+0.02	0.30	0.43	−0.13
II	7.77	8.79	−1.02	2.31	3.26	−0.95	0.39	0.51	−0.12	0.19	0.21	−0.01	0.24	0.39	−0.15
III	7.69	8.51	−0.82	2.30	3.10	−0.80	0.37	0.52	−0.15	0.15	0.19	−0.04	0.34	0.38	−0.04
IV	8.30	9.15	−0.85	2.57	3.37	−0.80	0.48	0.51	−0.03	0.14	0.20	−0.06	0.33	0.44	−0.11
1959 I				2.18	2.30	−0.12	0.46	0.50	−0.04	0.22	0.14	+0.08	0.28	0.40	−0.12
II							0.49	0.53	−0.04	*0.25*	*0.15*	*+0.10*	*0.28*	*0.48*	*−0.20*

See notes, page 69, for changes to this table.

(a) In 1949 and 1950 includes British-protected Persian Gulf states.

Table 15 (contd.). Trade of primary producing countries

$ billion, quarterly averages

	South Africa			Latin America excluding Venezuela			Oil producing countries						Others (excluding oil producers)		
							Sterling(b)			Non-Sterling					
	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance
1948	0.15	0.40	−0.25	1.38	1.35	+0.03	0.13	0.16	−0.03	0.59	0.46	+0.13	1.23	1.60	−0.37
1949	0.15	0.33	−0.18	1.14	1.15	−0.01	0.10	0.11	−0.01	0.62	0.46	+0.16	1.29	1.74	−0.45
1950	0.17	0.25	−0.08	1.41	1.24	+0.17	0.14	0.11	+0.03	0.71	0.44	+0.27	1.44	1.57	−0.13
1951	0.22	0.38	−0.15	1.61	1.77	−0.16	0.36	0.18	+0.18	0.81	0.51	+0.30	1.90	2.13	−0.23
1952	0.22	0.34	−0.12	1.40	1.71	−0.31	0.48	0.22	+0.26	0.73	0.55	+0.18	1.77	2.29	−0.52
1953	0.23	0.35	−0.12	1.54	1.41	+0.14	0.50	0.25	+0.25	0.74	0.54	+0.20	1.77	2.16	−0.39
1954	0.26	0.36	−0.10	1.55	1.60	−0.05	0.54	0.21	+0.33	0.85	0.60	+0.25	1.90	2.20	−0.30
1955	0.26	0.37	−0.11	1.52	1.62	−0.09	0.60	0 25	+0.35	0.96	0.66	+0.30	2.04	2.35	−0.31
1956	0.30	0.38	−0.09	1.63	1.67	−0.04	0.62	0.27	+0.35	1.09	0.71	+0.38	2.12	2.51	−0.39
1957	0.32	0.42	−0.10	1.57	1.85	−0.28	0.66	0.31	+0.35	1.21	0.93	+0.28	2.24	2.86	−0.62
1958	0.28	0.43	−0.15	1.46	1.71	−0.25	0.71	0.30	+0.41	1.21	0.88	+0.33	2.14	2.72	−0.58
1956 I	0.27	0.40	−0.13	1.61	1.61	—	0.62	0.27	+0.35	1.04	0.71	+0.33	2.15	2.38	−0.23
II	0.28	0.39	−0.11	1.60	1.63	−0.03	0.65	0.27	+0.38	1.09	0.70	+0.39	2.12	2.56	−0.44
III	0.29	0.37	−0.08	1.52	1.66	−0.14	0.64	0.26	+0.38	1.11	0.68	+0.43	2.02	2.41	−0.39
IV	0.30	0.36	−0.06	1.57	1.76	−0.19	0.56	0.29	+0.27	1.11	0.77	+0.34	2.21	2.37	−0.16
1957 I	0.33	0.41	−0.07	1.64	1.66	−0.02	0.54	0.28	+0.26	1.12	0.87	+0.25	2.31	2.66	−0.35
II	0.32	0.42	−0.10	1.55	1.86	−0.31	0.67	0.32	+0.35	1.25	0.88	+0.37	2.26	2.96	−0.70
III	0.30	0.43	−0.13	1.50	1.90	−0.40	0.73	0.32	+0.41	1.25	0.92	+0.33	2.17	2.87	−0.70
IV	0.34	0.43	−0.09	1.54	1.93	−0.39	0.69	0.31	+0.38	1.22	1.03	+0.19	2.19	2.98	−0.79
1958 I	0.30	0.48	−0.18	1.45	1.62	−0.17	0.66	0.31	+0.35	1.19	0.91	+0.28	2.21	2.76	−0.55
II	0.29	0.45	−0.16	1.45	1.70	−0.25	0.72	0.30	+0.42	1.16	0.84	+0.32	2.12	2.68	−0.56
III	0.26	0.40	−0.15	1.42	1.70	−0.28	0.74	0.29	+0.45	1.21	0.85	+0.36	2.02	2.57	−0.55
IV	0.28	0.38	−0.10	1.52	1.68	−0.16	0.72	0.31	+0.41	1.29	0.94	+0.35	2.19	2.85	−0.66
1959 I	0.28	0.36	−0.08												
II	*0.31*	*0.40*	*−0.09*												

See notes, page 69, for changes to this table.

(b) In 1949 and 1950 excludes British-protected Persian Gulf states.

Table 16. World industrial production

Index numbers, 1953 = 100, seasonally adjusted

	World (a) (b)	U.S.A.	Canada	U.K.	Continental O.E.E.C. (c)	Western Germany	France	Italy	Belgium	Sweden	Netherlands	Austria	Latin America (a)	Japan (a)	U.S.S.R.
1950	83	84	83	94	82	72	89	78	93	95	88	86	91	*55*	69
1951	92	90	90	98	92	85	99	89	106	100	91	97	96	74	80
1952	94	93	94	94	94	91	98	91	101	98	91	98	98	82	89
1953	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1954	100	93	100	108	109	112	109	109	106	104	110	114	107	108	113
1955	111	104	110	114	121	129	117	119	116	111	118	133	118	117	127
1956	116	107	120	114	131	139	128	128	123	115	124	138	126	144	141
1957	120	107	120	116	139	147	139	138	123	119	126	146	134	167	155
1958	117	100	117	114	142	152	154	141	115	120	126	150	136	169	170
1957 I	120	108	123	115	137	146	141	136	125	118	129	142	127	163	
II	121	108	121	116	139	147	143	137	124	120	127	146	134	172	
III	117	108	120	117	139	146	146	139	117	120	126	146	138	168	
IV	120	104	116	116	141	149	151	139	123	120	121	150	135	165	
1958 I	115	97	117	116	142	151	156	139	118	121	124	150	128	167	
II	115	96	118	114	142	150	154	138	112	119	125	149	134	163	
III	114	101	117	113	142	151	153	140	115	119	128	151	140	166	
IV	123	105	119	115	144	155	151	145	116	121	128	150	139	179	
1959 I	122	108	124	116	144	156	152	148	113	122	133	151		190	
II		114		119	*149*	159	157		*116*	*122*	*137*				
March		110	125	117	146	161	153	148	114	123	136	152		206	
April		112	127	119	149	158	156	150	117	123	134	152		195	
May		114		119		158	156	144	115	119	138	145			
June		116		120		160	159			*123*	138				
July		114				*158*									
August		111													

(a) World, Latin America and Japan are not seasonally adjusted. (b) Excludes U.S.S.R., Eastern Europe and China. (c) Excludes Spain.

Table 17. The United States[(a)]

Quarterly averages, seasonally adjusted (b)

	Gross national product	Consumers' expenditure		Public spending on goods and services		Gross private fixed investment		Value of physical changes in stocks	Net foreign investment	Durable goods		Building and contracting orders	Unemployment (c)	Employment (b)	Consumer prices (b)
		Durable goods	Other goods and services	Federal	Other	Dwellings	Other			Manufacturers' sales	Manufacturers' new orders				
	$ billion, at constant 1954 prices									*$ billion at current prices*			*per cent*	*millions*	*1954 = 100*
1950	79.5	8.03	46.2	6.2	5.88	3.88	8.30	1.80	−0.70	26.41	30.95	*4.6*	5.0	59.96	89.5
1951	85.5	7.30	47.4	10.4	6.03	3.23	8.80	2.43	0.03	31.13	38.03	*5.0*	3.0	61.01	96.7
1952	88.4	7.13	49.0	13.7	6.13	3.20	8.75	0.75	−0.05	32.81	35.06	*5.3*	2.7	61.04	98.9
1953	92.3	8.28	50.5	15.1	6.38	3.40	9.13	0.13	−0.63	37.13	33.10	*5.6*	2.5	61.95	99.7
1954	90.8	8.10	51.4	12.2	6.93	3.85	8.78	−0.40	−0.10	33.71	30.47	*6.3*	5.0	60.89	100.0
1955	98.2	9.90	54.1	11.3	7.43	4.55	9.55	1.53	−0.15	39.24	41.56	*7.6*	4.0	62.94	99.7
1956	100.2	9.50	56.6	10.4	7.65	4.05	10.28	1.13	0.63	41.42	43.33	7.9	3.8	64.71	101.2
1957	102.1	9.63	58.1	10.7	8.08	3.85	10.28	0.50	0.95	42.48	39.26	8.0	4.3	65.01	104.7
1958	99.8	8.93	59.4	11.0	8.60	4.05	8.63	−0.89	0	37.21	36.43	8.8	6.8	63.97	107.6
1957 I	102.2	9.70	57.5	10.9	7.98	3.88	10.43	0.58	1.23	43.95	42.13	8.7	4.1	63.21	103.3
II	102.5	9.60	57.9	10.9	8.03	3.83	10.33	0.93	1.05	42.76	40.60	8.4	4.1	65.31	104.3
III	102.7	9.73	58.5	10.6	8.03	3.83	10.38	0.63	0.98	43.00	38.68	7.9	4.3	66.43	105.4
IV	101.0	9.43	58.5	10.5	8.28	3.85	9.98	−0.13	0.58	40.57	35.92	7.5	4.9	65.09	105.8
1958 I	97.8	8.80	58.4	10.7	8.43	3.85	9.00	−1.60	0.20	36.35	32.88	7.8	6.5	62.18	106.9
II	98.3	8.75	59.0	11.0	8.45	3.83	8.53	−1.33	0.03	35.26	34.50	9.0	7.2	63.98	107.7
III	100.2	8.83	59.9	11.1	8.65	4.08	8.40	−0.80	0.13	37.36	37.55	9.8	7.4	65.06	107.8
IV	102.7	9.38	60.2	11.3	8.88	4.45	8.53	0.28	−0.35	39.85	40.78	8.7	6.4	64.64	107.8
1959 I	105.2	9.70	60.9	11.2	9.10	4.83	8.70	1.40	−0.68	41.81	44.14	9.1	6.0	63.09	107.8
II	108.0	10.30	61.8	11.3	9.10	5.05	9.05	2.30	−0.88	46.45	46.89		5.1	66.12	108.4
March						5.60(d)				43.20	45.97	9.8	5.8	63.83	107.8
April						5.80(d)				45.50	47.39	9.8	5.3	65.01	107.9
May						5.80(d)				46.55	45.72	9.3	4.9	66.02	108.0
June						5.70(d)				47.30	47.55	10.1	4.9	67.34	108.4
July						5.65(d)							5.1	67.59	108.8
August													*5.5*	67.24	

See notes, page 69, for changes to this table. (a) The U.S. index of industrial production is shown in table 16. (b) Employment and consumer prices are not seasonally adjusted. (c) Per cent of civilian labour force. (d) Figures at current prices.

Table 18. Industrial countries : imports by volume and import and export prices

Index numbers, 1953 = 100

	Volume of imports						Import prices				Export prices				
	U.S.A.	U.K.	OEEC. incl. U.K.		Western Germany	France	U.S.A.	U.K.	Western Germany	France	U.S.A.	U.K.	Western Germany	France	Japan
			From outside	Intra-trade											
1950	92	90	91	87	75	89	88	84	94	87	88	84	81	82	82
1951	91	101	98	93	77	101	111	112	120	114	101	99	99	97	122
1952	96	93	96	90	89	99	105	110	114	112	100	104	107	103	108
1953	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1954	93	101	108	115	126	108	103	99	96	99	99	99	96	94	97
1955	103	113	120	130	152	123	102	102	100	98	100	101	98	95	93
1956	112	112	130	139	171	142	104	104	102	99	103	105	101	100	96
1957	115	116	137	147	192	150	106	106	103	104	107	110	104	102	97
1958	119	116	138	145	206	149	100	98	95	95	106	109	103	98	91
1956 I	113	115	126	126	150	129	104	104	102	99	104	104	100	97	95
II	109	114	134	139	169	149	104	105	103	100	103	104	100	100	96
III	111	108	128	133	174	138	104	102	103	98	103	105	101	101	97
IV	113	111	133	152	191	150	105	106	101	101	104	106	102	101	97
1957 I	114	119	141	147	184	162	107	109	104	106	107	109	103	103	99
II	111	115	139	144	183	163	106	109	105	105	107	109	104	103	98
III	113	113	132	141	191	138	105	105	104	105	107	111	104	103	97
IV	119	116	134	154	210	138	104	101	101	100	108	110	104	98	95
1958 I	115	114	138	142	198	159	102	98	98	96	107	109	104	98	93
II	116	112	137	143	191	162	101	98	96	95	106	109	103	99	91
III	115	115	133	143	209	133	100	97	93	96	105	109	103	98	90
IV	130	122	144	156	228	142	99	98	93	94	106	108	102	96	89
1959 I	134	118	137	149	207	139	98	97	92	87	107	108	101	88	89
II	*141*	124			240	*149*	98	96	90	*89*	*106*	108	101	90	90

See notes, page 69, for changes to this table.

Table 19. Industrial countries' exports of manufactures

	Volume							Value, total	Shares					
	Total	U.S.A. (*a*)	U.K.	Western Germany	France	Japan	Others (*b*)		U.S.A. (*a*)	U.K. (*c*)	Western Germany	France	Japan	Others (*b*)
	Index numbers, 1953 = 100							$ *bn.*, quarterly averages	*Per cent of total value*					
1950	86	86	110	42	98	81	84	5.0	27.3	25.5	7.3	9.9	3.4	26.6
1951	100	103	109	72	119	89	100	7.0	26.6	21.9	10.0	10.0	4.3	27.2
1952	98	102	100	87	96	94	98	6.9	26.2	21.5	12.0	9.2	3.8	27.3
1953	100	100	100	100	100	100	100	6.9	25.9	21.2	13.3	9.0	3.8	26.8
1954	111	106	104	127	110	140	108	7.4	25.2	20.3	14.8	9.0	4.7	26.0
1955	125	115	113	150	123	186	122	8.5	24.5	19.6	15.4	9.3	5.1	26.1
1956	136	128	120	174	114	222	133	9.6	25.3	19.0	16.4	7.8	5.7	25.8
1957	146	135	123	201	129	250	140	10.7	25.4	18.0	17.5	8.0	6.0	25.1
1958	145	122	118	213	139	255	143	10.5	23.3	17.8	18.6	8.6	6.0	25.7
1956 I	127	125	118	148	105	199	123	9.0	26.5	19.8	14.9	7.8	5.3	25.8
II	140	134	126	179	119	216	135	9.9	25.7	19.3	16.3	7.9	5.3	25.5
III	131	119	112	171	108	219	132	9.2	24.6	18.5	17.0	7.8	5.9	26.1
IV	145	131	123	196	120	255	143	10.4	24.5	18.3	17.3	7.8	6.1	26.0
1957 I	144	135	125	183	135	265	137	10.5	25.7	18.4	16.4	8.6	5.5	25.3
II	149	147	126	196	132	240	140	10.9	26.8	18.1	16.9	8.2	5.5	24.6
III	143	128	118	202	115	269	139	10.4	24.8	17.8	18.2	7.4	6.6	25.2
IV	150	132	122	223	133	265	144	10.9	24.5	17.6	18.6	7.8	6.2	25.3
1958 I	141	123	121	195	134	255	135	10.3	24.2	18.6	17.4	8.5	6.1	25.2
II	144	127	115	210	131	246	142	10.4	24.4	17.5	18.1	8.3	5.8	25.9
III	141	113	116	214	125	239	141	10.1	22.3	18.1	19.6	8.1	5.9	26.0
IV	154	123	120	230	165	279	153	11.1	22.5	17.0	19.1	9.5	6.1	25.8
1959 I	143	115	117	205	149	263	139	10.1	23.1	18.4	18.4	8.7	6.2	25.2
II	158	123	125	235	174	290	156	*11.3*	*22.2*	*18.0*	*18.8*	*9.5*	*6.4*	*25.1*

(a) Excluding special category.

(b) Belgium-Luxembourg, Canada, Italy, Netherlands, Sweden and Switzerland.

(c) U.K. figures adjusted to exclude Channel Islands, etc.

Table 20. Commodity prices

	N.I.E.S.R. price index numbers (a)						Commodity prices														
	Current U.K. import prices				Exports, primary producers	Exports, overseas sterling area	Wheat	Sugar	Tea	Coffee	Cocoa	Rubber	Jute	Cotton	Wool		Copper	Lead	Zinc	Tin	Softwood
	Total	Food, tobacco	Industrial materials	Fuels			Can. $ per 60 lb.	U.S. cents per lb.	rupees per lb.	U.S. cents per lb.	U.S. cents per lb.	d. per lb.	£ per ton	U.S. cents per lb.	Merino d. per lb.	Cross-bred d. per lb.	£ per ton	£ per ton	£ per ton	£ per ton	Index
	1957 = 100						*Average of daily or weekly prices*														*1954 = 100*
1950	..	..	..	..	..	..	2.13	4.96	2.39	50.5	32.2	33.3	116	37.0	164	91	179	106	119	745	66
1951	..	..	..	..	..	..	2.33	5.68	2.12	54.2	35.6	50.8	179	42.3	199	126	220	162	172	1077	99
1952	..	..	..	..	..	..	2.16	4.16	2.06	54.0	35.6	28.4	112	39.7	126	64	259	135	149	964	109
1953	..	..	..	..	..	..	1.86	3.41	2.06	57.9	37.3	19.9	96	33.8	147	75	254	91	75	732	99
1954	..	..	..	..	..	..	1.73	3.26	2.65	78.7	58.2	20.2	102	35.1	128	77	249	96	78	719	100
1955	..	..	..	..	..	..	1.74	3.24	2.34	57.1	37.3	33.6	98	34.6	107	75	351	106	91	740	109
1956 1st half	..	..	..	..	..	..	1.74	3.32	2.43	56.0	27.1	28.0	99	36.4	105	72	370	117	98	780	110
1956 III	102.3	105.3	104.0	90.5	102.8	101.9	1.73	3.34	2.49	60.0	28.2	26.2	94	34.7	118	75	297	116	95	769	109
IV	105.6	107.5	105.5	101.6	104.9	104.8	1.70	3.87	2.92	60.4	26.7	30.3	119	34.5	124	80	279	117	99	821	109
1957 I	105.5	104.4	104.5	111.0	104.6	103.7	1.69	5.86	2.28	60.3	23.1	27.0	114	35.2	133	84	250	114	100	777	111
II	101.8	101.3	102.6	100.7	102.3	102.6	1.65	6.23	1.63	57.8	27.2	27.0	120	35.4	137	90	236	101	86	767	110
III	98.5	99.2	99.2	94.8	98.9	99.6	1.62	4.65	2.14	54.4	32.2	26.4	108	35.1	125	84	207	91	74	744	110
IV	94.3	95.2	93.7	93.6	94.2	94.1	1.61	3.84	2.15	54.1	39.6	24.0	115	35.7	105	74	185	81	67	732	109
1958 I	94.1	97.0	91.9	92.8	91.9	93.0	1.64	3.57	2.22	54.6	43.5	22.9	112	36.1	98	65	168	74	63	731	107
II	94.6	100.2	90.6	91.4	91.6	93.4	1.61	3.45	2.15	50.3	46.8	22.3	115	36.3	95	58	183	73	63	731	104
III	95.2	101.5	90.6	91.7	91.0	92.2	1.64	3.49	2.01	45.9	45.7	23.6	108	36.3	86	56	205	71	64	726	101
IV	95.7	102.8	90.8	91.1	90.3	91.4	1.64	3.48	1.99	43.5	41.5	25.2	105	36.1	76	56	233	74	73	752	97
1959 Jan.	95.7	104.2	89.8	90.2	88.7	90.9	1.64	3.26	1.94	41.5	37.6	25.0	112	35.7	74	56	230	72	75	759	96
February	94.0	101.6	89.9	86.2	88.7	91.3	1.71	3.10	2.18	39.6	36.8	25.2	110	35.7	77	59	236	70	74	772	95
March	93.7	99.8	91.1	85.9	89.3	91.9	1.70	3.05	2.35	37.3	38.7	26.2	113	35.7	79	59	249	70	75	780	95
April	94.3	99.3	93.4	84.9	92.0	96.2	1.68	2.87	2.01	37.5	37.8	27.7	115	36.0	94	68	240	69	73	782	94
May	95.1	100.1	94.4	84.7	93.5	97.5	1.68	2.93	2.11	37.0	37.5	29.8	116	36.3	94	69	236	71	77	784	95
June	94.7	100.5	93.4	84.2	92.4	96.1	1.68	2.83	2.02	36.5	37.4	28.0	112	36.1	91	64	230	70	78	788	95
July	95.0	101.6	92.9	84.3	91.9	95.5	1.67	2.70	1.84	36.6	36.3	28.6	111	35.7	*93*	*69*	221	70	80	792	95
August	*96.9*	*104.0*	*95.1*	*84.2*	93.4	97.8	1.66	2.70	2.00	36.6	37.7	31.5	109	35.6	*96*	*74*	231	72	85	793	96

See notes, page 69, for changes to this table. (a) See *National Institute Economic Review*, No. 1, page 32, and pages 69 and 70 of this number.

Table 21. Gold and foreign exchange reserves (a)

$ billion

	Industrial countries											Primary producing countries									
	Total	U.S.A.	Canada	U.K.	Continental O.E.E.C.	Western Germany	France	Italy	Netherlands	Belgium	Japan	Total	Sterling area countries	Australia	New Zealand	India	Pakistan	South Africa	Malaya	Oil producers	Latin America excl. Venezuela
1954	38.99	21.79	1.95	2.76	11.42	2.64	1.37	1.04	1.28	1.03	0.74	10.73	4.84	0.94	0.24	1.78	0.33	0.42	0.40	0.89	2.52
1955	40.03	21.75	1.91	2.12	12.87	3.08	2.08	1.24	1.28	1.13	0.77	10.64	4.48	0.67	0.18	1.79	0.37	0.37	0.48	1.02	2.62
1956 I	40.39	21.77	1.88	2.28	13.00	3.21	1.97	1.24	1.29	1.18	..	10.16	4.35	0.61	0.19	1.81	0.39	0.34	0.49	1.01	2.86
II	40.76	21.87	1.91	2.39	13.10	3.59	1.79	1.29	1.21	1.18	..	10.31	4.36	0.61	0.26	1.68	0.39	0.32	0.48	1.16	2.92
III	41.31	22.03	1.92	2.33	13.52	4.00	1.56	1.36	1.14	1.18	..	10.13	4.18	0.64	0.24	1.54	0.37	0.32	0.48	1.27	2.78
IV	41.08	22.06	1.94	2.13	13.40	4.29	1.36	1.31	1.07	1.14	0.94	11.02	4.25	0.71	0.19	1.36	0.37	0.37	0.46	1.53	2.53
1957 I	41.16	22.41	1.93	2.21	13.32	4.50	1.26	1.30	1.04	1.06	0.74	11.15	4.42	0.87	0.21	1.35	0.38	0.38	0.45	1.48	2.77
II	42.02	22.73	1.95	2.38	13.97	4.89	1.23	1.35	1.02	1.06	0.51	11.19	4.16	1.03	0.27	1.20	0.33	0.35	0.44	1.82	2.68
III	41.95	22.76	1.90	1.85	14.49	5.76	0.83	1.43	0.92	1.03	0.46	10.78	4.05	1.06	0.24	0.99	0.29	0.30	0.44	1.93	2.43
IV	42.67	22.86	1.84	2.27	14.68	5.64	0.78	1.53	1.06	1.13	0.52	10.36	3.86	1.05	0.14	0.87	0.29	0.29	0.43	1.95	2.36
1958 I	43.09	22.49	1.88	2.77	14.81	5.56	..	1.61	1.24	1.21	0.63	9.80	3.71	1.03	0.12	0.81	0.32	0.25	0.42	1.76	2.10
II	42.87	21.41	1.93	3.08	15.61	5.83	..	1.71	1.29	1.35	0.72	9.39	3.46	0.98	0.14	0.70	0.28	0.22	0.42	1.80	1.99
III	42.74	20.93	1.90	3.12	16.79	6.10		2.05	1.34	1.42	0.76	9.41	3.15	0.90	0.16	0.63	0.23	0.25	0.42	1.60	2.15
IV	43.96	20.66	1.94	3.15	*17.40*	6.23	*0.90*	2.23	1.42	1.46	0.81	*9.55*	*3.24*	0.89	0.18	0.63	0.25	0.29	0.43	*1.68*	2.01
1959 Jan.	43.81	20.53	1.91	3.11	17.39	6.10	1.04	2.36	1.52	1.43	0.87		3.77	0.91	0.18	0.65	0.26	0.31	0.42	*1.57*	
February	43.90	20.52	1.90	3.16	17.38	6.02	1.15	2.43	1.43	1.39	0.94		3.94	0.91	0.19	0.69	0.26	0.33	0.43		
March	43.94	20.49	1.90	3.14	17.44	5.63	1.25	2.51	1.42	1.41	0.97		3.88	0.90	0.22	0.70	0.26	0.33	0.43		
April		20.36	1.92	3.25		5.44	1.30		1.42	1.48	1.01			0.94	0.23	0.67	0.26				
May		20.23	1.93	3.12		5.55	1.50		1.37	1.47	1.07			0.98	0.24	0.67	0.26				
June		19.75	1.94	3.17		5.53	1.63		1.37	1.45	1.11				0.25	0.65	0.27				
July				3 22																	

NOTES ON STATISTICAL APPENDIX

GENERAL NOTES

Country groups

The following country groups are used ; they include all the countries listed against them, unless stated otherwise.

Industrial countries : USA, Canada, UK, Continental OEEC, and Japan.

North America : USA and Canada only.

OEEC : Austria, Belgium-Luxembourg, Denmark, France, Western Germany, Greece, Iceland, Irish Republic, Italy, Netherlands, Norway, Portugal, Sweden, Switzerland, Turkey, UK.

Continental OEEC : Excludes sterling area countries—Irish Republic, Iceland, and UK.

Western Europe : Continental OEEC and Spain, Yugoslavia and Finland.

Primary producing countries : All countries not included as industrial countries above, except for Eastern area, Spain, Yugoslavia and Finland.

Overseas sterling area : The British Commonwealth (except Canada), British Trust Territories, British Protectorates and Protected States, Burma, Irish Republic, Iraq, Iceland, Jordan, Libya, Muscat and Oman.

Latin America : Central America, including Mexico but excluding the Panama Canal zone, and South American countries excluding European possessions.

Oil-producing countries, sterling : Iraq, British-protected Persian Gulf States (including Kuwait) and Aden, Sarawak, Brunei and Trinidad.

Oil-producing countries, non-sterling : Iran, Saudi Arabia, Venezuela and the Netherlands Antibes.

Other primary producing countries : All primary producing countries not included elsewhere.

Eastern area : Albania, Bulgaria, Czechoslovakia, Eastern Germany, Hungary, North Korea, North Vietnam, Poland, Roumania, Union of Soviet Socialist Republics, and the People's Republic of China.

Valuation of imports and exports

Imports are valued c.i.f. and exports and re-exports f.o.b. unless otherwise stated.

NEW OR REVISED SERIES

(Full definitions and explanations were given in the National Institute Economic Review, number 1, January 1959, pages 51-54. An article on pages 36-38 of that number explained the figures in table 11 for stock changes of imported commodities, and an article on pages 32-35 explained the NIESR price index numbers in table 20. The notes on page 53 of the March and on page 43 of the May 1959 issue of the Review described revisions or new figures in that issue ; the notes below describe some further revisions.)

Table 1. Gross domestic product

New official estimates of expenditure at 1954 market prices (*Economic Trends*, July 1959) have been incorporated in this table. This means that figures before and after 1954 may not be exactly comparable. The early figures will be revised as soon as the *National Income and Expenditure* (*Blue Book*) 1959 is published.

Table 2. Production and employment in industry

The Central Statistical Office has revised the figures before 1954, using 1954 instead of 1948 weights. This has altered slightly the production and productivity figures for the years 1948 to 1954.

Table 3. The labour market

The unemployment figures by industry are slightly affected by the change-over to the new Standard Industrial Classification which took place in June. The figures for April and May have been reclassified according to the new classification so that figures for the second quarter of 1959 are on the new basis.

Table 4. Prices

The revisions to total final prices are the result of the new estimates published in *Economic Trends*, July 1959. These prices are now derived from total final expenditure *including* the value of the physical stock change.

Table 6. Personal income and expenditure

Estimates of consumers' expenditure on services and tobacco have now been revised by the Central Statistical Office (*Monthly Digest*, July 1959). The figures before 1952 are not strictly comparable with those in later years. The figures for expenditure on cars and motor-cycles are no longer seasonally adjusted, since the seasonal adjustment was found to be unreliable. (See page 60.)

Table 8. Building orders and work done

The slight changes in this table are accounted for by the use of revised price indices based on 1954.

Table 9. Changes in the volume of stocks

The change in the total volume of stocks is now estimated by the Central Statistical Office. (*Economic Trends*, July 1959.) Revised estimates of changes in the volume of stocks in manufacturing and distribution result from revisions to the Board of Trade wholesale price index numbers.

Table 10. Finance

The figures on hire purchase debt have been revised by the Board of Trade in the light of the results of the 1957 Census of Distribution. (*Board of Trade Journal*, August 21, 1959).

Table 14. Trade of industrial countries

Continental OEEC figures exclude Spain.

Table 15. Trade of primary producing countries

This table now shows separately the trade of oil-producing countries, both sterling and non-sterling.

Table 17. The United States

Gross national product figures have been revised by the Department of Commerce. There has been a minor revision to the figures of unemployment for 1952 to 1956. (*Survey of Current Business*, July 1959.)

Table 18. Industrial countries : import prices

The new French import price index now reflects the change in the unit value of imports expressed in terms of dollars, calculated on the basis of current import values in dollars and the volume of imports, both published in *International Financial Statistics*.

Table 20. Commodity prices

The NIESR price index numbers of United Kingdom imports and primary producers' exports were explained on pages 32 to 35 of the first issue of this Review. These indices have now been improved by :

(1) including 31 new series of commodity prices, extending the coverage of the indices ;

(2) replacing 16 of the old price series by 19 other series which are either more suitable or obtainable earlier ;

(3) using new weights based on 1958 United Kingdom imports, and 1957 exports of primary producing countries ;

(4) re-basing all indices on 1957 = 100.

The commodities and new weights used in the current price indices are shown in table 42, page 70.

Table 21. Gold and foreign exchange reserves

From the beginning of December 1958, French figures are for gold and convertible foreign exchange holdings of the Bank of France Exchange Stabilization Fund.

Table 42. Commodities and weights used in the current price indices

Weight per 1,000

Commodity	Quotation (origin and market)	U.K. import prices[a] (c.i.f.)	Primary producing countries: export prices (f.o.b.)[b]			
			Overseas sterling area	Latin America	Other	Total
Food and Tobacco						
Live animals	Fat cattle, Dublin	15	17	5	4	10
Beef	Australian and Argentine, London	27	14	27	1	15
Lamb	New Zealand, London	26	20	3	—	10
Pork	London	1	—	—	—	—
Bacon	Danish, Polish and Dutch, London	30	—	—	—	—
Butter	Australian and New Zealand, London	20	22	2	—	11
	Danish, London	17	—	—	—	—
Wheat	Australian and Argentine, London	7	13	31	15	19
	Canadian, Fort William; U.S., Gulf	28	—	—	—	—
Rice	Burmese, Rangoon; Thailand, London	2	21	1	72	27
Barley	Canadian, Australian, and various types, London	11	5	5	10	6
Maize	U.S., Argentine and South African, London	16	8	9	5	8
Fruit and tomatoes	13 quotations[c]	34	17	35	45	28
Raw sugar	Commonwealth Agreement contract	30	26	—	—	12
	Cuban f.o.b. (2 quotations)	14	17	166	73	76
Coffee	Brazilian, Colombian and Salvadorian, New York	2	3	338	21	109
	Uganda, Mombasa and Congolese, Antwerp	4	14	—	68	22
Cocoa	West African, London and New York	12	29	—	22	19
	Brazilian, New York	—	—	26	—	8
Tea	Orange pekoe, good medium, broken, Colombo	13	27	—	—	13
	Clean black pekoe, Calcutta	26	37	3	11	20
	Various types, London	6	—	—	—	—
Oilcakes	4 quotations[d]	8	1	4	6	3
Other food	7 quotations[e]	20	16	1	4	9
Tobacco	Rhodesian, auction price	10	10	3	—	6
	U.S., auction price	17	4	11	5	6
Industrial Materials						
Hides	Cattle hides, London (2 quotations) and Chicago; sheepskins, Port Elizabeth	7	27	15	10	20
Oilseeds and nuts	6 quotations[f]	18	26	—	83	31
Rubber	Malayan, London and Singapore; Indonesian, London	25	74	1	142	67
Softwood	Board of Trade import price index	42	—	—	—	—
Hardwood	Board of Trade import price index	11	—	—	—	—
	Ghanian, Liverpool; Ivory Coast, Bingerville	—	11	19	33	18
Woodpulp	Scandinavian, c.i.f.; U.S. and Canadian, f.o.b.	35	—	—	—	—
Raw wool	Australian, New Zealand and South African, auction prices, country of origin	38	211	—	7	101
	Argentine, Boston	5	—	41	—	13
Cotton	U.S., New York	13	—	—	—	—
	Egyptian, Alexandria (2); other, Liverpool[g]	15	26	52	150	62
Other textiles	4 quotations[h]	8	25	4	14	16
Iron ore	4 quotations[i]	29	9	40	17	20
Oils and fats	8 quotations[j]	17	22	13	46	24
Fertilisers	4 quotations[k]	8	—	9	24	8
Textile manufactures	3 quotations[l]	16	61	—	7	30
Steel	4 quotations[m]	11	—	—	—	—
Aluminium	U.K. import price	16	—	—	—	—
Copper	L.M.E. and Connecticut Valley, U.S.	36	38	74	42	50
Lead	L.M.E.	5	14	18	7	14
Tin	L.M.E. and Singapore prices	4	21	9	28	19
Gold	London fixing	—	89	9	9	46
Other materials	18 quotations[n]	54	25	26	19	24
Shipping Freights	Tramp shipping, voyage and time charter	25	—	—	—	—
Fuels						
Petroleum and refined products	18 quotations[o]	163	—	—	—	—
Coal	Ex North French mines	3	—	—	—	—
		1,000	1,000	1,000	1,000	1,000
Coverage (in percentage of total)		*66*[p]	*78*	*83*	*70*	*77*
Value of total, £mn.[q]		*3,780*	*3,605*	*2,219*	*1,945*	*7,769*

(a) Weighting base: 1958 imports.
(b) Weighting base: 1957 exports.
(c) Oranges (2 quotations), bananas, apples (4), pears, Brazil nuts, sultanas (2) and tomatoes (2).
(d) Groundnut, linseed, sunflower seed and soya bean cakes.
(e) Cheese, wheatflour (2 quotations), lard, eggs, oats and pepper.
(f) Groundnuts, copra (2 quotations), palm kernels, linseed and soya beans.
(g) Nigerian, Sudanese, Peruvian, Pakistani, Brazilian, East African and Mexican, Liverpool.
(h) Jute, sisal, Manila hemp and flax.
(i) U.S., Lake Superior; Brazilian, Swedish and French.
(j) Whale, linseed, groundnut, palm, coconut, olive and castor oils and tallow.
(k) Superphosphate, potash fertilisers, ground phosphate rock and saltpetre, London.
(l) Cotton yarns, Liverpool, cotton cloth, London, and jute fabrics, hessians, Calcutta.
(m) Steel plates, sheets, joists and channels, 2 quotations from U.S and 2 from E.C.S.C.
(n) Nickel, zinc, cobalt, silver, asbestos, platinum, mercury, Kraft paper, tin ore, pig iron, manganese, synthetic rubber, iron and steel scrap, tungsten ore, plywood, newsprint (2) and pyrites.
(o) F.o.b. prices of crude oil from the U.S., Venezuela and 5 Middle East countries, and of refined products (motor spirit, gas/diesel oil, fuel oil, kerosene and lubricants) from the U.S., Venezuela, Iran and the Netherlands Antilles. Tanker freights based on the Average Freight Rate Assessment of the London Tanker Brokers Panel, with a special surcharge during the Suez crisis.
(p) Food and tobacco, 68 per cent; basic materials, 79 per cent; fuels, 94 per cent; semi-manufactures (Divisions 1-13 of Class D of the Import List), 56 per cent; finished manufactures (rest of class D), nil.
(q) U.K. imports: c.i.f. 1958. Exports of primary producing countries: f.o.b. 1957 (excluding petroleum).